

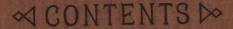
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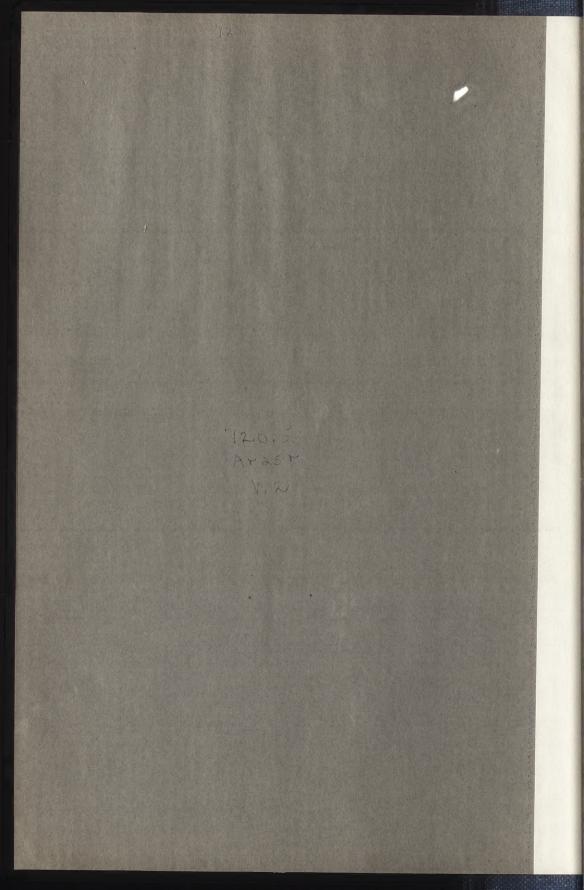
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JULY-SEPTEMBER, 1892.

CONTENTS.

		P	AGE
MODERN AMERICAN RESIDENCES—No. III.,	ILLU	STRATI	ONS
HILDESHEIM AND ITS CHURCHES,			9
RECENT DEVELOPMENT OF EARLY RENAISSANCE IN ENGLAND, .			31
BANISTER F. FLETCHER, A.	R. I.	B. A.	
THE CATHEDRAL OF ST. JOHN THE DIVINE,			45
WHERE THE SHIPS COME IN. (Poem),			54
NEW YORK FLATS AND FRENCH FLATS, HUBERT, PIRSSON & HODDI	cĸ.		55
THE BASILICA OF SANTA MARIA MAGGIORE,	v.		65
MODERN MOSAIC IN ENGLAND,			79
ARCHITECTURAL ABERRATIONS.—No. IV.,	•		89
BYZANTINE ARCHITECTURE. (Neo-Byzantine), PROF. AITCHISON.			93
CROSS-CURRENTS. (Editorial),			100
AMERICAN ARCHITECTURE. (Book Review),			105
RAYMOND LEE.—Part V.,			108

ILLUSTRATIONS.

Residence of A. S. Bushnell, Esq., Springfield, Ohio (6 plates), Frontispiece; The Cathedral, Hildesheim, Frontispiece; HILDESHEIM—Cathedral Cloister, 10; St. Michael's Church, 12; Interiors of, 14, 15; St. Godehard Church, 17; Interior of, 19; Rathhaus, 20; Templar and Wedekind Houses, 22; Timber Building, 23; Deutches Haus, 24; Timber Building, 26; Knochenbaueramts Haus, 27; Greenwich Hospital, 30; Banqueting House, Whitehall, 31; Somerset House, 32; Travelers' and Reform Clubs, 33; Scotland Yard, 34; Newgate Prison, 36; Exterior of Birmingham Law Courts, 37; Interior of, 38; Royal English Opera House, 39; City of London School, 40; Examination Schools, Oxford, 41; Exterior of Dawpool, 42; Fireplace in Dawpool, 43; Cathedral of St. John the Divine, 44; Sections and plans of, 45, 46, 47, 48, 49, 50, 51, 52, 53; New York Flats and French Flats (plans illustrating article), 60, 62; The Basilica of S. M. Maggiore, 65, 66, 67, 68, 69, 76; Modern Mosaic in England, 79, 80, 81, 83, 84, 85, 86, 87; The Peddie Memorial Church, Newark, 91.

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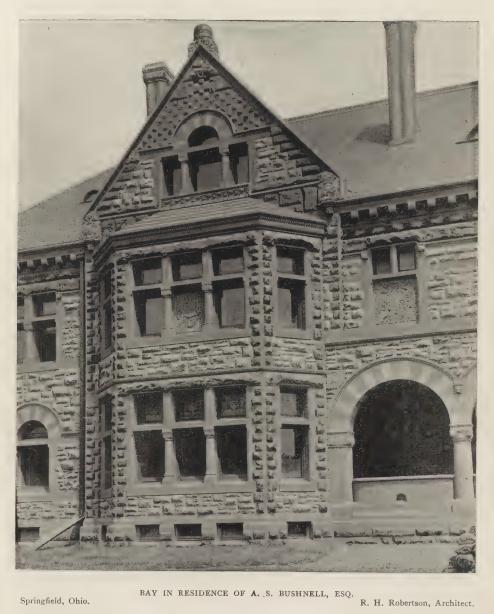




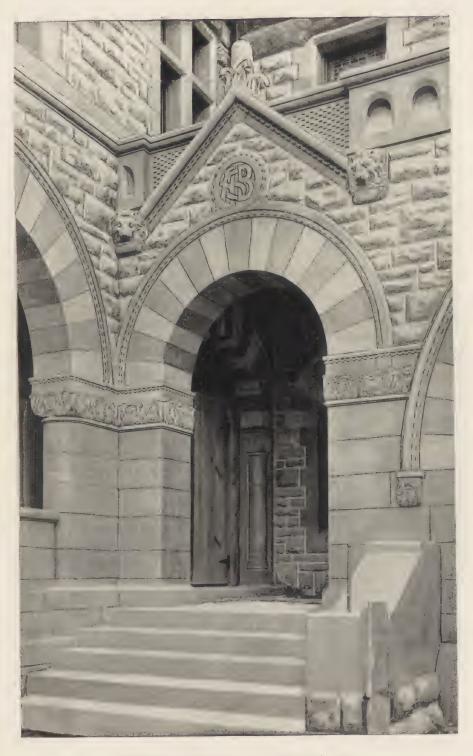
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THE CATHEDRAL, HILDESHEIM.

Architectural Record.

Vol. II.

JULY-SEPTEMBER, 1892.

No. 1.

HILDESHEIM AND ITS CHURCHES.



year 822, Hildes- foundation. heim is mentioned

father to be established at the neighboring town of Elze. Less than a century heathen Saxons into subjection, and towns, Christianity was yet new in the land. Gunther, the first bishop, had been Canon of the Cathedral at Rheims. Three years after his elevation to the new Episcopal See he consecrated the first chapel, This chapel is supposed to have occupied the site under the present catheis built. A pretty rose-bush that now there since the days of Lewis the Pious the choir and crypt were being en-larged, a protecting, hollow wall was about the building when the new wall bush, and it must be admitted that chitecture. But it is easier for the lay-

S long ago as the many traditions repose upon a less solid

The succeeding century brought in history. In that prosperity to Hildesheim in common year, we are told, with the other towns in the old Saxon Lewis the Pious, land. The discovery of silver in the Charlemagne's Harz Mountains was the first great son and succes- cause of the new well-being that made sor, made it the itself felt. The growing power of the seat of the bishopric intended by his Saxon kings was another. There was a general quickening of the pulses of society that showed itself in the great before, Charlemagne had brought the building activity of the age. New which afterwards became famous, then declined, and now live only in the historical interest that their names excite, were founded at this time, and built about with strong walls as a protection against the Normans and the naming it in honor of the Virgin Mary. rude warriors of the North. Convents and monasteries, owing their existence, for the most part, to the piety of kings' dral, where the crypt of the new church daughters, sprang up in every direction. The bishops began to give their palaces clings to the outer wall of the cathedral and churches a richer decoration, and choir is said by tradition to have grown the more important towns became in consequence the seats of a thriving arthimself. In the twelfth century, when industry in a style to which the arthistorians long ago decided, with what justice we need not inquire, to give the built around the rose-bush, in order name of Romanesque. By the name that the vine might continue to grow they intended to designate the single predominant feature common to the had been completed. A bit of the old widely-varying forms of the art in arching may be seen behind the altar the different countries in which it in the crypt. This is the present took root-namely, its dependence voucher for the great age of the rose- in its main principles upon Roman ar-



CATHEDRAL CLOISTER, HILDESHEIM, WITH 1,000-YEAR ROSE-BUSH.

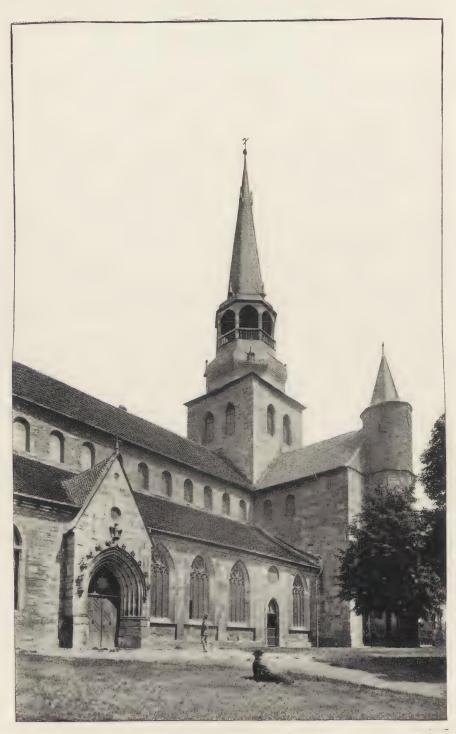
man to think of it as the art that domi- The power of the bishops once broken, nated Europe from the tenth to the Hildesheim joined the thirteenth centuries, as the earliest style League, and the blessing of a free comin which churches were built after By- merce poured wealth into the pockets zantine influences had been withdrawn.

the German Romanesque art, and as, fortunately for us, a period of ebbing fortune followed her first prosperity, her monuments were not carted away to make room for newer structures, but have come down to the inspection of the present day. It is the good Bishop Bernward whom Hildesheim has to ing their cross-timbers with carving, thank for all the beginnings of her preëminence in mediæval art. Bernward, before he became bishop, was an ardent out in bright colors the wood-work on student of the arts and sciences at the the façades of their houses. Again Cathedral School, and then tutor of the Hildesheim became the seat of a lively Emperor Otto III. He was made art-industry, as she had been in the old bishop in 993, and in the following year Romanesque days. The Gothic forms went out in 'person to fight the Normans. Besides managing the affairs of many an old house-front one can read his bishopric and acting as commander- a story of obstinate resistance on their in-chief of the Hildesheimers in time part to the lighter and more graceful of war, he found leisure to undertake fancies of the budding Renaissance. long journeys to Rome and Paris But they yielded at last, leaving the and a pilgrimage to the grave of new style in full sway until its own St. Martin at Tours, from which time came to degenerate and fade out relics. And yet this active public life, war and disturbance had come again which might be considered sufficient to take the place of sleek prosperity, for the energies of one man, did not and little opportunity was left for Roprevent him from devoting his leisure coco and modern Nondescript to creep to the art-handiwork that was prob- in and leave their impress on the proably the enthusiasm of his youth as ductions of former generations. In the well as the delight of his later years. present century prosperity has come Several curious articles of beautiful once more to Hildesheim and brought bronze workmanship in the Hildes- some evils in its train; but the glories heim churches have long by tradition of her two great periods-the early been ascribed to him; whether justly Romanesque churches and the quaint, or not, after the long lapse of years, it is difficult to determine. That in several branches of art-work he was personally engaged need not, however, be doubted; and the interest he took in all, expressed in his patronage of workers in every field of art, is quite certainly the cause of Hildesheim's early importance in the story of modern civilization.

contemporaries is not Hildesheim's has been so recently "restored," that it only title to the attention of modern is not so easy there to catch the spirit travelers. Centuries after the death of of the time in which it was built; St. her great bishop a new day of pros- Godehard's, on the other hand, is, experity dawned for the ancient city, ternally, older than St. Michael's

Hanseatic of her citizens. At this time the town Hildesheim was one of the cradles of received the characteristic appearance that it has preserved to the present day. Tall gabled houses plastered over with cross-beams were common enough throughout the whole Gothic period, but it required the spirit of the Renaissance, as well as the wealth of the new time, to give people the idea of coverof inscribing their doorways with German and Latin mottoes, and of picking did not yield easily to the new art; on brought home many sacred of sight. And when this happened picturesque timber-architecture of the German Renaissance—remain to the old town, and are better to be enjoyed here than anywhere else (so far as I know) in Northern Germany.

In a tour of the Hildesheim churches, it is perhaps best to begin with St. Michael's. Although the Cathedral occupies the oldest consecrated site in the town, the changes it has undergone But the work of Bernward and his have been so great, and the interior



ST. MICHAEL'S CHURCH, HILDESHEIM.

was originally a basilica with six towers, three aisles, two transepts, a double choir, and, underneath the west one, a crypt. The site was used first for a mon-Michael. In the year 1001, on his renative Hildesheimer and magister sexton, who told me of this arrange-artium. In the year 1259 the two side ment, made a queer face when he menaisles were rebuilt in Gothic style, and tioned it, and continued: "Yes, there is about the same time the ruined cloisters a spring down there, by the old bishop's were restored by Abbot Gottschalk. grave, whose water, they say, cures The church suffered much damage in cripples and rheumatics. I would not the epoch of the Reformation, and the give much for it myself, but the peasappearance it presents to-day, there- ants come to town on saints' days to fore, differs widely even from the drink it, and there is generally a pair of structure known at the beginning of old crutches there that some one has the fourteenth century. Of the six left behind him, on going away cured." towers, which stood originally one over Later, when a little boy from the each extremity of the two transepts, Catholic Orphan Home near by took and two at the intersections of these us there, we found the crutches, sure with the nave, one only—that over the enough. There was little else to see in intersection of the eastern transept the damp and dark underground chapel, with the main body of the church—re- except the sarcophagus of the sainted mains in its original size, while a por-tion of the one at the southeast angle worked himself, bearing for inscription of the building is to be seen. The the familiar "Scio quod redemptor meus others have all disappeared, most of vivit," etc. them having been removed when their

Church, as one sees it to-day, but its church by the piercing of a door interior has been scraped and cleaned through the thick wall; and the arms and then painted all over in bright of the adjacent transept have been colors until it fairly flashes with new- separated by interior walls from the ness and fresh paint. St. Michael's aisles of the church, thus forming two rectangular chapels on either side of what is now the main entrance. The western transept is also divided in this way into two square compartments, astery, dedicated by Bishop Bernward in with the chancel between them; on the 995, the year of the plague, to St. north side by a low partition wall, surmounted by a balustrade of miniature turn from Rome, the good bishop laid columns connected by arches, between the foundations of the church, and the each arch a statuette in stucco, and a work was carried forward with such frieze above and below-the whole of rapidity that on Michaelmas day, good Romanesque workmanship of the 1022, he was able to dedicate the time of Theoderich; on the south by a whole edifice. In the same year the modern wall, rendered necessary for bishop died, and his body was laid in purposes of strengthening. The real the crypt of the new church, from choir is reached by a steep flight of which it was afterwards removed to steps from the middle section of the the Cathedral. Eleven years more transept, now used as chancel, and went by before the church was entirely is put to no use in the present completed, and then in the year fol- arrangement of service. It stands lowing it was struck by lightning, and directly over the crypt, which is still a partial restoration had to be under- used as a Roman Catholic chapel, altaken. For the course of a century though the church, on the division of the church was used for public places of worship that followed the worship, and was then visited by a peaceable settlement of the Reformagreat conflagration, after which it was tion, fell to the share of the Protestants rebuilt by the Abbot Theoderich, a and is now occupied by them. The old

The interior of the church is very unsteady condition rendered them a beautiful. The roof is borne by pillars menace to the rest of the edifice. The and columns, one of the former alternateastern choir has long since been ing with two of the latter, this being turned into a sort of vestibule to the the original arrangement. The column



INTERIOR, ST. MICHAEL'S, HILDESHEIM.



INTERIOR, ST. MICHAEL'S.

the earliest style, or else carved in the form, but with pointed arching. The leaf and geometrical patterns character- rich capitals of the columns are modern istic of the art in its time of highest reproductions of the original. development; among the latter some of the richest work of the period is to be the early style, we could ask nothing found. (Casts of some of these capitals better than to be allowed to combine may be seen in the Metropolitan Mu- the interior of St. Michael's with the seum, New York.) Four of Bernward's exterior of St. Godehard's. Very grand original columns, all with cube capitals, and imposing is the latter in its simple, are still in their places; the rest are of majestic outlines. The best view of it about a century later. The church has is from the garden on the southwest, a flat wooden ceiling, which is decora- that from the rampart behind giving ted with frescoes of an antiquity greater quite another and less characteristic than that of any other painting of the impression. It needs to be looked up kind north of the Alps. aisle of the church was restored only at ization of its force and beauty. It has the beginning of the present century. less decoration even than the Michael's Before that, a part of it served as a church—nothing but the scalloped rope-maker's shop, and the lunatics friezes and a single high relief sculpture from the adjoining asylum came in over a side-portal on the north-but from that side, and danced in the high the purity of its line and the massivechoir. Between the arches in the south ness of its structure convey an imaisle have been placed the curious pression of solemnity and perpetuity, stucco figures of the Beatitudes. They as well as of ideal beauty, that few were taken down for restoration not churches combine in so marked a degree. long ago, and on being put back into In plan the church has many points of place, the restorers omitted to repaint resemblance with St. Michael's, differthe names on the scrolls, so that the ing from it, however, in a few importtradition concerning them has been lost, ant particulars. Like St. Michael's, it and it is not easy to determine where is a three-aisled basilica with a flat the names belong. The Hildesheimers wooden ceiling, the interior resting upon of to-day, so the sexton told me, are a two lines of alternate pillars and double rough lot, and it is not considered safe columns, the latter extremely rich in to keep the church open, except at time decoration, now unfortunately covered of service. This seems very strange, over with paint. Like St. Michael's, in view of the orderly, law-abiding also, it has two choirs, a westward as crowds one meets with everywhere well as an eastward one, this arrangeelse in Germany, and I could not ment being demanded by the exigencies but suspect that the old fellow had of the Benedictine form of worship. been the victim of some practical There is, however, but one transept, at jokes that made him unjustly sus- the eastern end, so that the church has picious of his fellow-townsmen. The the form of a single, instead of a double only from the little side street leading to the Asylum entrance. It is necestary to go through this in order to reach three massive towers, two at the west of the thirteenth century. They are in transept with the nave. The interior

capitals are either plain cubes, as was the transition style, Romanesque in

For a perfect Romanesque church of The north to, not down upon, for a complete realchurch from without is not very beauti- cross. The side aisles are continued all ful, although quaint. The west choir, the way around the eastern choir, and shut off from the church grounds by a three large circular niches are thrown high cross-wall, which serves as a bound- out from the aisle thus formed behind ary line between the two religions, the chancel. This arrangement of the shows Romanesque carving in the win- choir is often to be met with in French dow lunettes, and a graceful frieze. churches, but is foreign to the German This is the only decoration on the ex- builders, and Bishop Bernhard, who terior of the church, and is to be viewed founded the church in 1133, is credited the cloisters, which date from the middle end and one at the intersection of the



ST. GODEHARD CHURCH, HILDESHEIM.

throughout.

self in an open ground close to the old which rises the Bernward column, a wall of Hildesheim, now made into a very ancient piece of bronze work, on pleasant promenade, walking upon which in half relief are twenty-eight which one can half circumvent the scenes from the life of Christ. A model town. Opposite the west choir is an of this is in the Metropolitan Museum old building now used as the town in New York. There is an air of peace prison, before which a solitary sentinel and remoteness about this little square, stands and keeps watch, while in its placed on a level of its own slightly small square windows, provided with above that of the rest of the town, and iron easements of a quaint pattern, one out of most lines of traffic, that makes may catch a glimpse, occasionally, of it seem one of the quietest spots in the the poor wretches confined there. world. The great church imparts to it The walls of this building descend something of dignity and solemnity, straight, in the rear, into a switt brook— and there is nothing on which the eye it is called a river in Hildesheim, I need rest that takes away from its charthink—and over this on a bridge runs acter of semi-private repose. a road that enters the town through what was once the southern gate. If be open, it is easy to knock at the door we forego the pleasure of a walk on the of one of the little houses opposite and old rampart—which is pretty at any the sexton, a smooth-faced, white-haired time, and must be delightful in summer old man, looking like a benevolent ing yourself in so sure a haven of rogant, imperious character, has turned a bright green, at the east- pursued was that exemplified in the ern end. Opposite, at a respectful dis- other Hildesheim churches of which

was thoroughly restored in strict Ro- tance, are some simple residences, tiled manesque style, between the years 1848- and cross-timbered, arranged in the arc 1863, the painting, which covers every of a circle; at the farther end of the inch of wall with bright colors, having square some more imposing buildings, been executed by Welter, of Cologne. the palace of the Archbishop among The interior, accordingly, harmonizes, them; and on the angle over against the in its gaudiness, but ill with the majestic church, a pretty old house, decorated simplicity of the building itself—a fact in Renaissance style, and newly painted the more to be deplored from the per- -used at present for I know not what fect harmony of proportion that prevails purpose. Hidden from us where we stand is a pretty group of trees, nestling The Godehard church stands by it- close to the church, in the centre of

If the church should not happen to when the broad trees cast their shade priest, will place himself at your over it—there is a shorter way, through disposal. So many have been the the Hinter-Brühl, of gaining the little changes through which the church Cathedral platz. The Brühl is a nar- has passed, so many the alterarow little lane, running through a part tions and additions undertaken from of the town undisturbed by the entime to time, that it is no exaggeration croachments of the modern style of to say that the artistic creeds of eight house-building, and it grows still nar- centuries stand recorded upon its walls rower in climbing the slight elevation —only each style is imperfectly reto the Cathedral square, finally de-vealed, having been partially obliterbouching upon it, if I remember aright, ated or disfigured by that of the sucthrough a passage-way under a house. ceeding age. The oldest portion is But once in the *Dom-platz*, as it is called, the crypt, built on the site of the you will straightway forget how you original minster, destroyed by fire in came there in the sense of relief at find- 1046. Bishop Hezilo, a prelate of artranquility. In the middle stands fought a duel once with the Abbot of the Cathedral—a fine, imposing Fulda, in the presence of the Emperor, church, two towers and a large, to decide which should occupy the seat outstanding porch facing the west, and of honor next to the Archbishop of a smaller tower roofed, as the body of Mayence, began the building of the the church between, with sheet iron that Cathedral in the year 1055. The plan



INTERIOR, ST. GODEHARD, HILDESHEIM.

we have already spoken: a three-aisled basilica, namely, supported by alter- way back to the little square, where in nate pillars and double columns, the evening dimness we caught our Towards the end of the eleventh cen- first glimpse of Hildesheim. The tury the lengthening of the choir was Rathhaus occupies the east side of undertaken, and the cloisters, in it, on the south are the Templar late Romanesque style, were built in and Wedekind houses, fine specimens the first quarter of the fourteenth cen- of Hildesheim architecture, and on tury, the beautiful Gothic chapel of the northwest corner stands the im-St. Anne, very pure in style and ele-posing mansion of the Butchers' vated in feeling, was erected in the Guild. side chapels in the Cathedral date its ecclesiastical middle-point, and one from the last quarter of this century, may expect to find here a rich developthe south aisle being late Gothic; and ment of that timber-architecture, of are the work of the last century.

It is now, perhaps, time to wend our This square is the civic centre middle of the cloister court-yard. The of Hildesheim, just as the Dom-platz is at the beginning of the next century which the town is one of the classic Count Lippold von Steinberg built the sites. The Rathhaus itself is the pronorth transept in richer development duct of several different periods, and of the same style. The addition of the presents some odd dissimilarities of style, small tower, or cupola, over the inter- but the general effect is decidedly picsection of the transept and nave, and the turesque. The gables on the southdisfiguring of the interior with stucco east end are the oldest part of the builddecoration and wall and ceiling frescoes ing, dating from the latter part of the fourteenth century, while the timber Passing through the sacristy into the out-building, in the shape of a tower, at cloisters, one's eye is surprised and de- the other end, was added in the sixlighted at the beauty of the little court- teenth century. The building has reyard. The cloisters, which encompass cently undergone a thorough renovation, it on three sides, the cathedral choir, and the great Gothic council-hall is now upon which the immortal rose-bush being decorated by Prell of Berlin with grows, occupying the fourth, are frescoes representing famous events in double-storied and of late Romanesque Hildesheim history. In front of the construction. Almost all the wall be- Rathhaus stands the pretty Roland's tween the delicate arches of the upper fountain, consisting of a basin, its sides story is covered with luxuriant ivy. carved with the half-figures of heroes, Above this, a red tiled roof with double and a column rising in the centre, which row of dormer windows affords a pleas- bears the armed figure of the knight. ing contrast of color. In the middle The house of the Templars, built in of this court-yard, as has been already 1457, in late-Gothic style, has two mentioned, stands the beautiful little curious corner towers, connected by chapel of St. Anne. About it are thin archings with the square top of the grave-stones, some of great age and façade. It has a fine oriel, but the considerable artistic merit. That of opening of a shop on the ground floor the priest, Bruno, dating from the end has not contributed to the picturesque of the twelfth century, shows the poor effect. Separated only by a narrow and the sick weeping for him, while his alley is the Wedekind house, so-called soul is borne by angels to Heaven. A from the name of its owner. This, with bronze tablet of graceful Renaissance the Butchers' Guild house, a few yards workmanship marks the resting-place away, is one of the best examples of of the Canonicus de Veltheim in the the painted and carved timber buildings lower story of the cloisters, and two to be found in Hildesheim. Both are others, having their origin in the Ro- tall wooden structures, whose stories, manesque time, preserve the memory supported on richly-carved consoles, of Bishop Adelog and Otto II. On the project, one above the other, over the south side of the cloisters is the chapel street. The Butchers' Guild house of St. Lawrence, whose low vaulting is goes up into one high point, the gable borne on round and octagonal columns. turned toward the square; the Wede-



RATHHAUS, HILDESHEIM.



TEMPLAR AND WEDEKIND HOUSES-ON THE MARKET, HILDESHEIM.

the main one. Having come recently been formed in Hildesheim

kind house is turned the other way, but in which the carvings are painted. has three smaller gables on the side of Within a few years a society has from Brunswick, we noticed how the the restoration of the old houses to Hildesheim houses, for the most part, their original state of painted splendor, have their gables turned to the street; and without cost to the present occuwhile in Brunswick the opposite ar- pants most of the faded tints have been rangement prevails. One of the chief renewed. Where the carving is particattractions of these houses is, of course, ularly delicate one feels that this could the decorative carving that runs in well have been dispensed with, but on broad bands across them, one for the whole it must be admitted that the



TIMBER BUILDING, HILDESHEIM.

names, Caritas, Prudentia, Temper- fancy. entia, Spes, Fortitudo, etc., may be seen. enhanced by the bright colors now fitted up as an inn and named ap-

every story. This carving was first work has been well done. What is practised as an art in the Harz moun- sometimes lost in beauty is gained in tain district, where wood for building character. The Butchers' Guild house, purposes has always abounded. The which dates from the year 1529, but has figures of men and animals and grace- more than once been restored, need fear ful arrangements of twining vine and comparison with no other building of other forms of vegetation are the favor- its kind in Germany. The carving here ite designs, and the same figures of the is wonderfully delicate and minute, the abstract virtues, all marked with their pattern showing a wealth of graceful

Quitting the market-place, it matters upon some dozens of houses. Long little which way we turn, we shall be inscriptions in German or Latin fre- sure to come upon quaint and delightquently accompany these designs, ful houses. Close around the corner in The picturesque effect is generally the Oster strasse is a fine old mansion,



DEUTCHES HAUS-OLD INN AT HILDESHEIM.

propriately "The Old German House." Its façade is quite covered over with street a German one in verse describes carvings, which follow the story-levels, pursuing them around corners and into by fire on St. Bartholomew's day with some curious angles. Among the fig- all it contained, but how before the risures on the carved friezes one discovers ing of the Christmas moon a wise Counthe four elements, Earth, Fire, Water and Air; old Roman divinities like before. Over a small door is the in-Mercury, Venus, Saturn, Luna and Sol, scription: and then a youth and an old man with a boy between them with a sand-glass, who bears the inscription hodie mihicras tibi (to-day is mine, to-morrow thine). These figures of the elements, like those of the abstract virtues, are perpetually recurring. In the neighboring Scheelen strasse are two curious buildings, the Rathsbauhof, erected in 1540, and the Braunschweiger Hof, of 1563. Some curious carving in low relief, of mystical subject, decorates the door of the first, while the façade of the second abounds in moralizing Latin inscriptions like Omnes cinis æquat, sola distinguit virtus, Ardua quæ pulchra, etc. The spirit of the Renaissance inspired the wealthy burghers with a taste for this sort of thing. Retracing our steps and passing again through the marketplace, we emerge in a few moments upon the Hohenweg, or highway, one of Hildesheim's chief thoroughfares. Many of the houses here have coats of arms, mottoes and inscriptions, and some of the older ones bear testimony to the different spirit that prevailed at their inception, in the religious subject of their carvings. These date from the Gothic period. Where nearly every house presents some feature curious to modern eyes, it is difficult to pick out anything for particular description. At the corner of the Hohenweg and the Rathhaus strasse is the Rathsapotheke, or establishment of the Apothecary to the Council. The lower part is of stone, containing the Hildesheim arms and the date 1656; then comes the timberbuilding, the upper stories of which advance far over the street. The corner building is the part actually occupied by the apothecary, a Rococo shield and arms over the door being supplemented with the inscription Eines hochedlen Rathes Apotheke MDCCLXIII (Apothecary of a very noble Council, 1763). The façade on the highway bears a

long Latin inscription, and on the side how the previous building was destroyed cil had restored it in better style than

> Wilt du Artzny oder süsse Wein So Geh dar die zu finden sein. Zwo ander 'Thür dir offen stan Zu Rath hir geht der Oldermann.*

Through a narrow passage-way from the highway, one enters the St. Andreas-platz, where several old houses will be found, in the language of the guide-books, "worthy of inspection." On one of these the carvings represent two men driving in a carriage to Heaven, while near them a boy sits astride of an eagle, and a woman is mounted on the back of some sea monster. On the house next this one, an inscription reads "Oh God, how it always happens that those hate me to whom I am doing nothing, that they grant me nothing and give me nothing, but still must suffer me to live. If they think I am ruined, they had better look out for themselves, but I trust God and do not despair—to them that deserve it, good luck comes every day." A few steps further on is the old Trinity Hospital. The two rows of consoles bear statuettes of various saints and apostles, the spaces between them being filled by modern frescoes of biblical subjects. The house is now an iron foundry. The so-called Arrow-house, built in 1623, has figures of the muses and virtues, besides some half-obliterated inscriptions. Then on the east side of the platz, the Grocers' Guild house, bearing date 1482, has a carved vine-pattern, with figures of saints and various coats of arms.

Turning down a narrow side street, at the end of which a charming glimpse of St. Michael's may be had, we find ourselves in the Langerhagen close to one of the show places of Hil-

^{*}If you seek physic or sweet wine, go over there where they are to be had. Two other doors are open to you, through this one goes the Alderman to council.



A TIMBER BUILDING, HILDESHEIM.



KNOCHENBAUERAMTS HAUS, HILDESHEIM.

dows of the first story, separated by ern taste.

with the quiet back street.

desheim—the "Emperor" or "Roman" it again. You see, the old German house. The ground building is of stone. humor, like the old German ale, was In the spaces between the large win- rather strong in the palate, to our mod-

are four statues of Roman emperors. tion to sight-seeing to exhaust all the Underneath them runs a freize representing hunting scenes. Beneath this the tempt a description of them here. But wall is covered with three rows of round there is a little pilgrimage that ought spaces or medallions, each inclosing not to be omitted, to the old Moritz the carved portrait of an emperor, with church, which stands on a slight emiinscription giving his name and order nence overlooking the town. On the in history. There are forty-six of way is a hideous modern villa, offered these medallions in all. The side some years ago, as a testimonial of reof the house turned to the wide court- gard to Dr. Windthorst, the leader of vard is also richly decorated, but in the Catholic party in Parliament, but a much less systematic way. It somewhat ungraciously declined by him. seems probable that a larger establish- The church is one of the oldest buildment had been intended, and that, the ings in Hildesheim—a basilica in form, plan coming to naught, the already pre- and the only one in North Germany pared decorations were placed pell-mell whose interior is borne entirely on colin their present positions. Though umns. A tower erected in 1765 directly curious and probably unique in its way, over the choir, is a beacon visible for the house does not please by reason of many miles around. The pilgrim will its pretentiousness, and one turns with do better not to go in, the church havrelief to the modest, high-gabled houses ing been disfigured with the tasteless about it, that harmonize so much better stucco ornamentation of the last century, but let him not neglect to visit One might wander for hours about the little cloister-court, full of weeds the Hildesheim streets, always finding and wild flowers that lend it an air of something new and interesting to talk picturesque desertion. The view from about. It is particularly surprising to the hill is the best to be had of Hildefind people still living in these old sheim, and is quite necessary to houses, which ought, from their appear-ance, to be inhabited by no generation which have become painfully confused later than Goethe's Gretchen. One in winding through the crooked streets. half expects them to fade away before The town itself is a mass of red-the his eyes, as the forms they call up- tint of the tiled roofs largely dominat-Gretchen and her immortal lover, Dame ing every other, and only broken in Martha and brave Valentine—pass from upon by the gray church spires. The the brain. Doubtless there are modern green valley forms a fitting background, Gretchens living now within these old through which the tiny river Innerste walls, Dame Marthas in plenty, fewer runs, a silver thread. Round about are Fausts perhaps, but more than one Val- the out-spurs of the Hartz mountains, entine, for the German youth is still a of which some of the higher peaks may soldier, combining military virtues with be seen to the south on a clear day. a strong sentiment for the sanctity of The scene is not magnificent, but it has his home. Many of the houses tell in a certain beauty of that quiet, domestic their carvings the employment of their order which the Germans seem to preowners. Over an ancient tavern in fer to grander aspects of nature. With the centre of the town I saw a series of a last look from this hill, where her four reliefs, the first of which displayed citizens are fond of coming with their a merman drinking deep from a horn; families on a Sunday afternoon to drink in the second, he had had enough, but beer or coffee, and to listen to the had not thrown the vessel away; in the strains of a band placed in a pavilion third, he had had decidedly too much; behind the trees, let us take leave of and in the fourth, he was getting rid of Hildesheim. The happy, healthful faces testify to the era of solid prosperity that has dawned anew upon the ancient city; and the care with which ished by their ancestors.

F. Kirke Paulding.





GREENWICH HOSPITAL.



BANQUETING HOUSE, WHITEHALL, LONDON.

RECENT DEVELOPMENT OF EARLY RENAISSANCE IN ENGLAND.



in this country, particularly of our own form of classical architecture.

which will hardly be denied nowadays when that period is better appreciated than was possible during the late Gothic Revival.

The specially English form of the late Renaissance began with Inigo and published, and this decline con-Jones, during the reign of James I and tinued to the end of the eighteenth Charles I, when he introduced the style century, being further accentuated by of Palladio, which he had studied so the isolation of England during the closely at Vincenza and Venice, and our Napoleonic wars. Peace returning,

understand the school has always followed, in the rise and probable main, that master, rather than Vignola, progress of this who became the patron of the French movement in school. Jones' successor, Sir Chris-England requires topher Wren, had more French leansome knowledge ings, owing to his travels having been of previous archi- confined to France; but this tendency tectural history is only in matter of detail, for St. Paul's and his other great works are Anglo-Palladian in form. The next great That the Renaissance, late as well as master was Sir William Chambers. early, took a native form in all the whose executed design of Somerset various countries of Europe is a fact House in London, has remained a constant exemplar of the style as applied to secular purposes.

After Chambers, there set in a period of decline, due to the slavish copying of Greek work, then newly discovered and published, and this decline con-



travel recommenced, and among the and below them is to destroy the chartravellers, was Sir (then Mr.) Chas. Barry, whose extensive tour included Egypt, Greece and Italy. His Egypt- light" and to provide this, means an ian studies brought him to Italy with fresh eyes, and in the Roman and Florentine palaces, as, for instance, the Farnese and Pandolphini, he saw the window means, as a rule, a freer treatelements of a new development in ment of the orders, owing partially to English classic.

acter of the style.

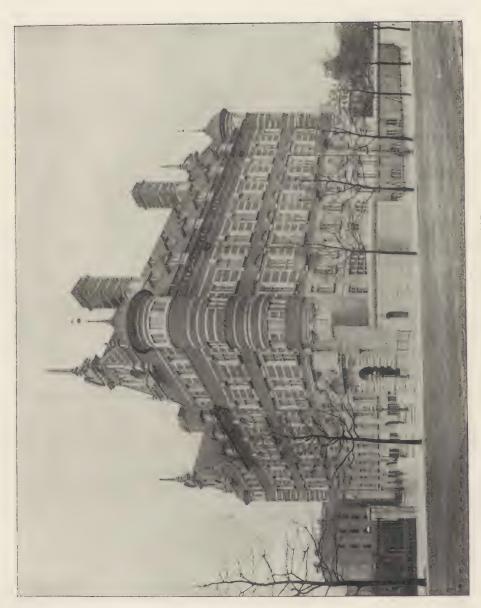
Now, the modern cry is "light, more essential change of style, for large windows, undivided by mullions are destructive of scale, and a mullioned the necessary wide spacing.



TRAVELERS' AND REFORM CLUBS.

The essential ideas of this style were orders in favor of a grand crowning is needless to say this new treatment buildings of all classes erected in imiof modern progress is running alto- composed of large slabs of slate, a windows less than the total width of the style becomes necessary. Con-

It is an old observation that styles the practical abolition of the Palladian are based on roofs, windows, and doors, and the first of these has perhaps the cornice and the use of rich window largest influence. Now, our Gothic dressings contrasted with the plain history and northern climate have space between, below, and above. It given us an innate love of roofs, in which Barry fully shared, and his first started a craze, and numberless are the classic works had low pitched visible roofs; but we may suppose he felt a tation of the Travelers and Reform want of harmony, for the fact remains, clubs, the two masterpieces of Sir that his later works have none. Nor Chas. Barry. The tendency, however, can we call the earlier low roofs, often gether against such work, since it is frank roof treatment, and if we imagine essentially a small window style, for, the usual high roofs on such buildings to make the intervals between the we can at once see what a change in the window with its dressings, and to sidering then, this situation of the old reduce the proportional space above Anglo-classic school, and bearing in



NEW POLICE OFFICES, SCOTLAND YARD.

mind the fact that the practical failure with Gothic ideas, however much toned of the Gothic revival movement for down for nineteenth century use, is secular buildings had forced its leaders to adopt a more modern expression of modern wants, what other causes of the early Renaissance movement need we look for?

Here we must revert for a moment to what took place on the break down of our historical Gothic development in the reign of Henry VIII; for it is in many respects a similar situation.

its climax is now generally admitted, are of the very type which is so charand the non-adoption of the new Italian acteristic of the English classic. And elements, then being imported, is as in- in one or two recent great competitions, conceivable as the non-adoption of the even more closely historical examples Norman ideas, by the Saxon architects, were offered, both for the Imperial in the reign of Edward the Confessor.

Elizabethan, and Jacobean, and our two stories in height, on the usual purpose will not now allow us to enter basement, as the central projecting into that subject in detail; but our read- feature of his design. And, in the laters should consult a splendid collection ter, Mr. Macartney had the courage to of permanent photographs of this work imagine a museum for the nineteenth from 1560 to 1630, now being published century, based on Newgate prison, that under the direction of Messrs. Gotch masterpiece of prison architecture by & Talbot, a book which is likely to George Dance, who designed its winexercise considerable influence on our dowless façades of a bold, rough, rustifuture work. As a style, it is enough cated masonry in harmony with the to say that high roofs are the rule, and ideas evoked by the name of prison. that it even errs in excess of window lighting, while the orders and other gospel of Anglo-classic by pen and Italian details are used in the most free and reckless fashion.

That it has an essentially Gothic foundation is proved, we think, by the failure of former efforts to revive it at a time when a true Gothic feeling was wanting, for it is a fact, often overlooked, that Sir Gilbert Scott practised it for his early buildings before he took up the gospel of Gothic Art.

Mr. Blore also, and Mr. Henry Shaw built houses intended to be examples Gothic, nor ignored as in too many of of the style. It was, however, approached from the classic side, and the watered-down classic than the bold and have been trained in the Gothic school of the past. and in a society which passed thro' a

more likely to meet with success.

This movement, however, is already threatened by the reviving forces of the Anglo-classic. No one acquainted with the past work of that school will fail to see how much it is influencing our present work. What, for instance, do not Mr. Norman Shaw's new police offices on the Thames embankment owe to it, a sturdy, yet, startlingly original That our noble Gothic had reached building. Still its gravity and strength Institute and for our new South Ken-The style produced by the admix- sington Museum buildings. For the ture of Italian details, with a founda- former Dr. Rowand Anderson proposed tion of Gothic building, has various even so reactionary a feature as the phases and names, such as Tudor, typical eighteenth century portico of

Another architect who preaches the pencil is Mr. Brydon, whose buildings are marked by a thorough grasp of the style he practices; while at present at least, he avoids the characteristic failings of the period. In fact, if the designers of this school are to win the mastery, they must solve the problems of a symmetry not pedantic, of shams agreed to be offensive, and of an outward expression of internal wants, neither excessive like our modern the buildings they propose to imitate.

We are afraid our American readers buildings of this date are more like will here leave us with the cry: but why all this historical treatment?, why imilawless erections of the historical period. tate at all?, to which we reply that our Hence, the new revival by the men who atmosphere is charged with too much

Art is truly free, but what has been, Gothic fever, and became acquainted will be, and we shall move on the lines of the past for the work of the future. You, in a new country, with new wants, may evolve new treatments of your own wants, and in time we may graft your new ideas and our older practice.

are moving against the early Renaissance development, let us see how the latter movement is at present situated. Italian detail by Mr. Oakeshott, who The large competitions held at intervals are convenient tests of the movements of the time. Here appear the probably have some influence, and in

Moreover, several students have lately been touring there, and there has been a rumor of a book of such detail. Italy, however, has been and will continue to be the great school of Having, then, seen what new forces students, and its early Renaissance, as well as the better known later work, has always been much studied. A book of was sent on a special tour by one of the building papers of London, will



NEWGATE PRISON.

first recognition.

error to take them too seriously; the real movements are very slow and gradual, though the surface agitation may be great. Thus some of us have been of late only too ready to cry "Spanish" as a new fashion for the sake of some freshness of detail and idea, and some of our students are inclined to turn their attention in that direction. For in a students' competition, a year or two ago, a clever student, since unfortunately deceased, these buildings, and despairing of the attracted much attention by a design of Spanish Renaissance character.

new phases and here they win their some designs of late, such detail has been used. Much of this study of It would, however, be a grievous Italian detail in England is undoubtedly due to the splendid collection of specimens at the South Kensington Museum, where the architectural exhibits are mainly of that period.

The Italian form, however, of the early Renaissance, has a strong rival in that of France, more especially in the magnificent châteaux which line the valley of the Loire.

An architectural writer, the Rev. Charles Petit,* first drew attention to

^{*}See Book Announcements in the front of this magazine.



EXTERIOR OF BIRMINGHAM LAW COURTS.



INTERIOR OF BIRMINGHAM LAW COURTS.

Gothic revival then in progress, called early French type. Their design, howpromise of classical and Gothic art.

on architects to study them, as a com- ever, was not accepted, but in the subsequent competition for the completion The Birmingham Law Courts, just of the South Kensington Museum, Mr. completed by Messrs. Aston Webb and Aston Webb has adopted a somewhat Ingress Bell, exhibit most clearly this similar treatment, but with terra-cotta influence. Being of terra-cotta, yellow low domes to his pavilions, and for the inside and red outside, the architects central feature a low tower, having a have been enabled to indulge in a pro- plain stalk below, and rich tapering



ROYAL ENGLISH OPERA HOUSE.

fusion of detail, mostly of an early crown above in accordance with the original in its application.

but more regular in grouping and ing. severe in its main lines, was submitted boundless profusion of detail of the portions: the central and two wings,

French character, yet often purely prevailing fashion of tower design. This fashion finds an even more pro-The grouping of the building is nounced expression in the central tower Gothic, while that of the plan is classic, of the Imperial Institute now being a combination first used by Sir Chas. built; the selected design of which by Barry in the Houses of Parliament, and Mr. T. E. Colcutt, F. R. I. B. A., is, since that time much favored amongst however, more Italian in detail and us. A design of a similar character, character, though very free in group-

It adopts in fact, a new form for a by the same architects for the Imperial public building in point of grouping, Institute, possessing, however, the same being broken up into three advanced



CITY OF LONDON SCHOOL.

which all project so far as to take a gable on the return, and the connection of the parts is only maintained by this lofty square central tower carried up as a plain stalk for a great height, and terminated by a kind of loggia story, domed in copper. In this building the details are of the smallest, and a striking feature is the finish of the main gables, the apex being enclosed in a sort of cage of columns and entablature on the smallest scale.

Whether this kind of bric-á-brac detail is the result of the attention we have been paying to such subjects is a question too long to discuss in this article, nor can we here allude to the alliance of sculpture and architecture illustrated in that building. The façade of the new Royal English Opera House by the same architect is an extension of the same principle. The influence of this early Renaissance movement on sculpture must be dealt with in another article.

We have been led to speak of this latter building by its proximity to the South Kensington Museum, but we did not mean to omit, as an instance of another and somewhat later type of the French Renaissance, the design of Sir Arthur Blomfield for the same Imperial Institute the main feature of which was a central domed octagonal structure with the side wings hipped back from it pavilion-wise, reminding us of the Architect Delorme and the Tuileries; this form of French work has, however, found little acceptance with us hitherto, but is well exemplified in the fine facade of the City of London School on the Thames embankment.

But there is, besides the early French and the Italian described above, the influence of the early Renaissance in England, as exemplified at Oxford, and elsewhere to be described. In the examination schools of that unique city, Mr. J. G. Jackson has given us a building full of local character and feeling,

which has a larger Gothic element, astical work mentioned above. Our perhaps, than is found elsewhere. Mr. movement then in the direction of Jackson's various other additions to early Renaissance work has not yet the old colleges are also, either of this, touched the church, and, except in a or of a more purely Gothic character. few minor details, and one or two purely In a place like Oxford where the church exceptional churches, we may say that element is so strong, the special preferall is Gothic so far. In our country ence for the Gothic as the more suit- houses, a subject we hope to describe able and historical style for church more fully hereafter, the Gothic ele-



EXAMINATION SCHOOLS, OXFORD.

sion, and no essay on English architecture can be complete, without a reference to the almost absolute supremacy of Gothic for churches, which being perhaps the most monumental form of every-day building, naturally exercises the greatest influence on all other work. Nothing is more certain than that no school of mere academical architecture would be sufficiently com-

building finds naturally a free expresment is naturally stronger than in town, but the happy compromise invented by Mr. Norman Shaw of a late Gothic simple, mullioned, gabled exterior, combined with Renaissance joinery, fittings and other details of any degree of suitable richness, has been the foundation of that school of domestic architecture which is likely to pervade the civilized world, and which has not been without its effect in prehensive for English architectural America, and is well exemplified in training, which must embrace forms of Dawpool by Mr. Norman Shaw. Here work suited to public, private, town, and the academy is vanquished and the country buildings, besides the ecclesi- Anglo-Saxon world rejoices in homes



EXTERIOR OF DAWPOOL.



FIREPLACE IN DAWPOOL.

of its own creating, and from such building will eventually follow, for homes is likely to arise the love all true architecture is but the exfor, and belief in, the future progpression of national wants and feeleress of architecture. If we build ings, and the nation begins in the well the home, good church and public family.

Banister F. Fletcher, A.R.I.B.A.



Heins & Lafarge, Architects.



SOUTH ELEVATION.

THE CATHEDRAL OF ST. JOHN THE DIVINE.



our readers the accepted plans for the Cathedral of St. John the Divine so

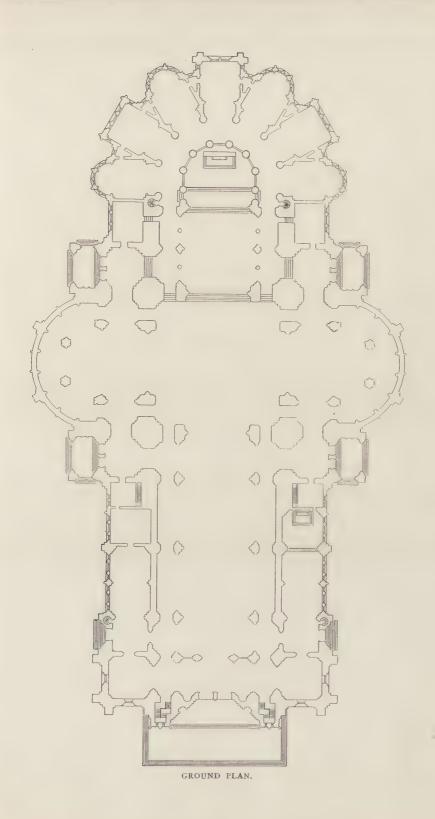
far as they have been matured. Though this publication represents them in a more advanced stage towards completion than any other that has been made the architect will not fail to observe each other. For example, the difference that appears in the perspective sketch of the choir as a separate fragment and crepancies appear to assume that the ditions of his work. It is this fact

EREWITH we present to geometrical drawings represent the most matured thought of the designers.

Certainly these drawings represent a wide departure from the accepted notion of a cathedral. In the mediæval cathedral the exigencies of vaulting control the entire plan. The outer line of the building is fixed by the ultimate buttresses of the nave vault, the posithat they are not fully matured and that tion of these is dictated by mechanical the drawings, made at different periods considerations and the aisels are the and representing considerable modifica- spaces accruing between this line and tions of the original scheme, do not, the line of the nave-vaulting itself. even at all essential points, agree with In the disposition of the parts there is no room for artistic caprice. Everything is as it must be and, to translate that phrase literally, but yet with an inin the rear elevation of the cathedral crease of significance, everything is are more than differences of detail and comme il faut. The architecture is the represent a considerable change in the exposition, more or less clear, more or general massing of the building. It less eloquent, according to the ability will doubtless be safe where such dis- of the designer of the mechanical con-



VIEW OF CHOIR.





MAIN LONGITUDINAL SECTION.

which gives to a Gothic cathedral its its detail, it was not exhibited in the poet knew:

"These temples grew as grows the grass; Art might obey, but not surpass; The passive master lent his hand To the vast soul that o'er him planned."

A cathedral without groined vaulting and so without the system of buttresses and flying buttresses which groined vaulting involves must be a very different thing from what we know historically as a cathedral, and it cannot be an example of Gothic architecture.

The dome is doubtless as legitimate a method of durably covering a space as a vault. It has indeed one advanthat, while the vault was the genera-

analogy to a natural organism and exterior architecture, but left to be inmakes Emerson's famous lines in "The ferred from the appliances that were Problem" more literally true than the exhibited for its support and its abutment. Above the monumental roof of masonry the architects of the Middle Ages found it practically necessary to construct a less monumental roof which masked the vaulting. In Spain alone was the vaulting merely protected and exhibited as the covering of the church, for the only example of a masonry roof in Northern Europe, the pointed tunnel-vault of Roslyn Chapel, is admitted to be of Spanish derivation. It cannot be said, however, that the innovation of the Spanish builders was artistically successful. The roof of Seville is simply invisible, except from a point above it, and the tage, and that is that the ceiling may lack of a visible roof is one of the debe visible exteriorly as the roof. It is fects that give the great church the a reasonable reproach against Gothic impression of an almost total lack of exterior architecture. But the domical ting principle of the whole structure and covering also presents its difficulties as determined its general form and even the visible roof and crown of a con-



MAIN TRANSVERSE SECTION AND SECTION THROUGH TRANSEPT.

ings. In each case, however, the roof The architects of the Italian Renaisoutside led the builders of St. Mark's dome with the brick pyramid of St. mosques and all the other dome-build- and a retrogression. ers whose prototype was St. Sophia, to terior feature, and which enabled the which is the central feature exteriorly. Mahometan architects in Asia, released The space covered by the dome and its

struction. The Roman and the true by the employment of un-monumental Byzantine domes, as represented respectively in the Pantheon and in St tural design, to erect the fantastic and Sophia, are true roofs as well as ceil- bulbous cupolas that crown their works. is too low to form an adequate culmi- sance may be said to have solved the nation of the exterior architecture, al- problem of a monumental dome, which though it is lofty enough for impressional be a crowning feature both insiveness in the interior. The desire to ternally and externally, and, after make it tell more effectively on the Brunelleschi and Bramante, the double in Venice and the builders of the Paul's in London appears a makeshift

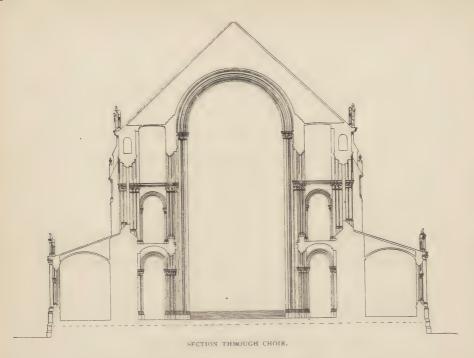
The dome, which is the central featconstruct double domes, of which one ure of the new cathedral internally, is was to be an exterior and one an in- covered and masked by the tower,



EAST ELEVATION.



WEST ELEVATION.



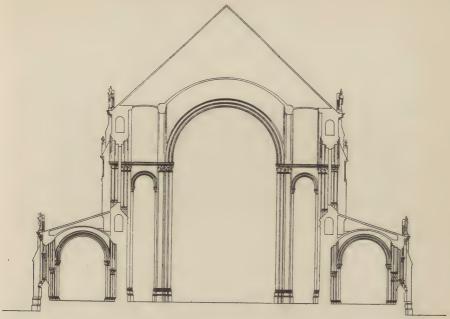
diæval cathedral is thus recognized and structure. provided for, as it was, more or less successfully, in nearly all the compet- we think, that the trustees should have

ing plans.

off from the interior, and the compara-tively slight thrust of the very light to be attained by the presentation of a

immediate appendages, including the tile-arch used in the covering of the transepts and the choir, is practically nave is resisted within the walls. the cathedral, the nave being but an Flying buttresses are thus rendered impressive approach. The whole space superfluous, and the main wall, inoccupied by the transepts is available stead of being a mere screen, as in as a vast auditorium, and the one great the Gothic cathedrals, is a real and difference between a modern and a me- massive wall which supports the entire

For the exterior effect, it is fortunate, decided to give the cathedral its true As we have intimated, the scheme of orientation, so that the western front construction, which contemplates a really faces the west and the apse, with domical covering not only for the cross- its ring of chapels, the east. The view ing but for each of the bays of the tobe mainly considered, and from which same, while the choir is ceiled with a the cathedral will be most conspicuous barrel vault succeeded by a semi-dome, and dominating is, of course, that from is by no means Gothic. It is very posthe east, from the lowlands beneath the sibly an ecclesiastical rather than plateau upon which it is to stand. The an architectural feeling that has led to only argument for placing the flank the clothing of such a structure in forms along the edge of the plateau, as was at that give it the general aspect of a first proposed, is that more of the Gothic church. This aspect it derives church can thus be seen at once. But almost wholly from the treatment of the thing to be aimed at, it seems to the towers. The aisles are not, as in us, is that the church shall really crown Gothic, the spaces between the nave the cliff and produce the effect that is piers and the ultimate buttresses. In- so striking in Mont Saint Michel and deed, the outer aisle is a cloister, walled in the cathedral of Limburg-on-the-



SECTION THROUGH NAVE.

symmetrical and pyramidal mass, such rounding these in plan and hipping terrace behind which rises the apse, tower outward and onward. great tower. The lofty gabled transept built, to a design for it that shall not of a Gothic cathedral loses its value only result in an impressive object, but than a light fleche at the crossing. By architectural problem.

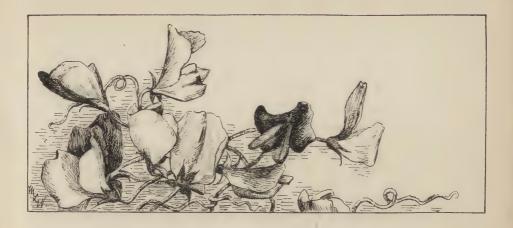
as is presented by the apse of the cathe- back the roofs, not only is the transept dral than by the exposure of the long taken out of competition with the censide. The massing of this apse has tral mass, but value and detachment been studied with high and successful are given to the low flanking towers skill. The ring of chapels forms a which carry the lines of the central flanked by its low and flat-topped picturesque object and considered by towers, and again by the sloping lines itself, the central tower will leave little of the transept-roofs, and from this to be desired, if the effect of its admirample base emerges the pyramid of the able massing is supplemented by effectlarge tower. It was a very happy ive detail. But from another point of thought to alternate square and rounded view, it will leave something to be defaces in the ring of chapels, and thus to sired, and that is as the outcome and secure the feeling of security and sta- expression of a dome, of which it now bility that in a Gothic chevet is given appears as a graceful and ingenious by the interpolation of the buttresses. mask. It is possible that the architects The treatment of the transepts, too, is may see their way, in the years that admirably adapted to contribute to the must intervene before the crowning supremacy and effectiveness of the feature of the cathedral comes to be when there is anything more important shall be the solution of a very trying



WHERE THE SHIPS COME IN.

ERE, where the ships come in, I do not wait For thy return Love; my heart knows its fate. To the wide world beyond my life you sailed, Sailed, for much mightier influences prevailed Than my poor love—the worship of a heart That could not break, nor use the accents of a nobler part Than that of slave—a beggar offering with a trembling mien A paltry coin, but treasured, for the affection of a queen. Oh, had she touched my life with love—Oh, Life thou little thing, If she had drawn thee close, close as but love can bring Two lives, the strength that grips thy nerves, the stir Within thy heart at times, declare, meseems, Thou might'st have seized the richest gold within thy dreams As crown for her. Thy folly mocks thee, Fool. It is a sin, Aught but thy silent love. No ships bring hope to thee; But, it is sweet to watch their phantom-coming in: They carry too and fro thy heart upon the sea.

Harry W. Desmond.



NEW YORK FLATS AND FRENCH FLATS.



treat the advent and system of living among us without considering it under the social as-

pects which must so largely affect the mere architectural side of the question. In France, where the custom of living in flats is immemorial, the whole system of building and the division of land are suited to the erection of apartment houses. With us, on the contrary, our narrow lots and our flimsy style of construction are intended for the rapid and fortune that a day may reverse, while economical erection of small private dwelling-houses that rarely outlast the lives of their builders. Even Yankee ingenuity could not devise several complete apartments all on one level and properly lighted and ventilated on a space intended for the building of a single home, nor could our light lathand-plaster mode of building stand the wear and tear and afford adequate safety in case of fire, or the proper isolation as regards sound, smells and insect life required in a large building, occupied by several families.

But the difficulties we have to contend with are not limited to the erection intercourse exists between the various double houses—that is, houses 25 feet

seems impossible to classes of society, utterly unknown in this country. Poor artisans frequently growth of the tenement occupy the upper floors of houses the lower floors of which are rented to people of high social standing. meet on the common stairs, and the fine lady exchanges cheerful greetings with her poorer neighbors without a thought of presumption on their part or of condescension on her own. With us things are different. All claims to social superiority are bitterly resented by people who regard the elevation of those above them as a mere accident of the favored few strive, through an excessive exclusiveness, to guard their dearly-cherished state of exaltation.

Let us take two apartment houses of about the same grade, one a "first-class French flat" on ____ street, New York City, occupied for some two and a-half years by intimate friends of ours, and the other a Parisian apartment we ourselves once lived in, and see in what respects the buildings, occupants and social surroundings differ in the two countries.

The New York house is of the ordinary type known as a first-class French flat, 21 feet wide by 80 feet deep, five of appropriate structures. In France the stories high, and situated on a good social status of each individual is gener- street built up solidly with houses of ally so clearly defined that a freedom of the same character, a few of which are

wide and with two apartments on each floor. The internal arrangements need hardly be described. A front parlor and adjoining hall-room, two centre rooms lighted, or rather ventilated, on a diamond-shaped open well used in common with the adjoining house, a dining-room, kitchen, small room for servant, and a bath-room ventilated on a shaft.

We, as supposed experts, were called upon by our friends to pass upon the merits of the building, and having duly examined the pipes and traps, pounded the floors, etc., pronounced it a wellbuilt, fairly well-planned and desirable dwelling-place. Our friends took the third floor, and we partook of a delightful little dinner given in honor of their installation. At first all was coleur de rose, the house was brand new and so prettily trimmed and decorated, so replete with ingenious contrivances, and so pure and fresh, with a delightful smell of new varnish, that our friends became enthusiastic in praises of their new home. When other tenants moved in we were told that every motion of the people above and below was rather too plainly heard, also that the tenants on the top floor had two somewhat rough and illbred boys, who nearly upset our friend's wife one day in their wild rush down the narrow public stairs, and who would not rub their feet on the front door mat, but left prints of their dirty boots all the way up on the bright Brussels carpet that covered the stairs and landings, and when their mother, a handsome, fashionably-dressed woman, with a whole jewelry shop on her plump fingers, was given a gentle hint regarding the matter, she said "that they had as good a right to the use of the stairs as folks living on the lower floors, and paid well-nigh the same rent anyhow." Still, on the whole, the tenants in the house were quiet, well-behaved, welldressed people, with no small claim to gentility, and our friends wisely remarked that they could not expect to have a five-story house all to themselves for \$40 per month.

With the warm weather in May and June, a somewhat objectionable feature, inseparable from flats built in streets, forced itself on our friend's attention.

We mean the great density of the population, especially of the little Lord Fauntleroy and other juvenile types, and the tendency of many of the tenants to make parlors of, and hold receptions on, the stoops. As our friends, however, closed their flat and moved into the country for the summer months, the thing did not so greatly trouble them. Another feature which struck them was the sudden appearance of prominent placards with "First-Class Apartments to Let" on every stoop and front in the block. This they found was owing to the fact that most of the tenants were too genteel to spend their summer in town, and too weak financially to pay rent for apartments they did not occupy; so that an exodus of a large part of the population took place, and upon their return in the fall they found one-half the personnel of their own particular building entirely changed.

The first serious disenchantment occurred when a maiden aunt came on a visit, and was given the centre room back of the parlor. Until now the two centre rooms had been empty, one being used as a store-room and the other, prettily furnished with a patent folding bed just like a book-case, being reserved as a spare-room and dignified with the name of "the library." It now became evident that a space 10x12, fenced off from a parlor by glass sliding doors, with a window on an inclosed well and overlooked by three other windows, one of them not over 5 feet distant in the adjoining house, and used as a passage-way from the front to the rear part of the apartment, hardly complied with the general idea that the first requirement of a bed-chamber is privacy. Still, the people on the opposite side of the well were quiet, respectable people, the maiden aunt kept her health and made the best of the difficulty, and things went on tant bien que mal for several months, when suddenly the people across the well moved away, and were followed by new tenants whose conduct, especially at night, made the centre room unfit for a lady's occupancy. Fortunately, the time set for the departure of our friend's relative had nearly come, and by keeping the window closely shut and curtained the its freshness, the unavoidable settlement and shrinkage had taken place and left its mark on the wood and ages had stained the ceilings and spoilt the decorations, the showy but somewhat cheap carpeting on the landings and stairs was much worn, and, worst of all, a certain atmosphere well known the Rue St. Honoré. to the occupants of houses of this class, began to pervade the house. New tenants were found, but they were decidedly of a lower grade. On the second floor came a large family with several men who smoked incessantly, both in their rooms and on the stairs and landings which they used as a regular part of their holding, and where rugs instead of carpets and the noise proved almost unendurable. Changes became more and more frequent, and last our friends also moved away, blaming us for our want of judgment, and pronouncing the house a worthless, ill-planned, ill-built sham, unfit for human habitation. '

And yet we hold that the fault lay, not with the landlord, who, if we consider the cost of land and building, our enormous tax rates, the constant shifting and changing of tenants which left a number of the apartments empty durcustoms which left him almost at the mercy of such of his tenants as chose to live rent free, certainly got more worry than large returns on his investof his client, and to plan a five-story building with a seven-room apartment custom, using materials and modes of two on each floor. The stairs and

nuisance was endured. Not so, how- construction suitable for small private ever, with the people above, who were houses, but utterly unfit for buildings really nice people with two growing to be occupied in flats, but to a comdaughters. After a useless protest they bination of adverse circumstances which gave notice and left, and were soon fol- cannot be overcome without a radical lowed by the tenants on the floor change in the division of our land, our below. The house by this time had lost mode of building, and a study of yet unsolved and most intricate social questions.

Let us now giance at the nature and plaster work, several accidental leak- working of a Parisian apartment house and see wherein it differs from the building just described. The house is situated on one of the narrow streets running south from the upper part of

The distance to the Place de la Concorde (which may be regarded as the centre of Paris) is about the same as from Fourteenth street to the Astor The street is not a fashion-House. able one, the sidewalks are narrow, the houses old and without the least pretence to architectural features or ornamentation, and are let in apartthey appeared with a painful disregard ments. The first thing that strikes one as to their toilet. Above, on the fourth accustomed to our noisy New York floor, a family with many children used streets, is the silent and almost deserted character of the place. The house itself has a frontage of at least 100 feet and is five stories high. In the centre almost always for the worse, until at is an arched passage-way paved with stone, shut off from the street by a strong plain iron grille, and giving access to a court-yard, back of which are low buildings, half of which are used as a stable and the other half as a shop for a piano maker. On the right of the archway is a small door for general use, and next to it is a small ground-floor shop with living rooms back of it, occupied by the portier (janitor), who is a repairing tailor by trade ing a part of the year, and our laws and and has a sign to that effect on the front window. Next to the entrance door, about the centre of the arched passage (which is as free and open to the air and storms as the open street), ment; not with the architect, who had is a door, always open in summer and done his utmost to carry out the views closed by a swing door in very cold weather. This admits one to a stonepaved vestibule, about i2x12, and to on each floor on a lot intended for and the stairs, which are also of rough adapted to accommodate one single stone. Strong, but very plain looking private family; not with the builder, who doors, painted a dark green, admit one had built according to long-established to the apartments, of which there are

landings are far from clean or well on their condition. nuity which enables some of our archi- floor to floor. lutely useless; but the elevations, though but it was devoid of water fixtures in the New York house, but rather larger, open without fear of intrusion. In fact, one thing, which with us seems entirely overlooked, had been taken into careful account; we mean privacy. If we add to this that the floors were so thick and solidly filled in between the heavy beams as to exclude sound, smells and insect-life communication, and that all the walls and partitions were of brick or stone, we will realize the great difference between our so-called French flats and the genuine article on the other side. The fact is, that in our sense of the word, the French, except perhaps the very poorer classes, do not live in apartments, reached by a narrow ascending street.

As regards the thousand and one inkept, a rough sweeping once a day and genious contrivances and conveniences, a mopping once a week being all the which with us have become almost a attention they receive, and the walls necessity, they are simply ignored. No and ceilings have reached that indepatent letter boxes or door openers are scribable color upon which time ceases necessary where the front door stands to have any effect. In fact, the stairs freely open except at night, and all may and landings are regarded as a continu- go in and out, with no other supervision ation of the public street, and have than the eye of the old porter, who sits been used for generations by all man- working at his bench close to the enner of people, without apparent effect trance way. No lift or back stairs for The internal ar- servants in a land where social condirangements of the apartments are crude tions are so clearly defined that the fine in the extreme and show an utter disre- lady may stop and exchange a pleasant gard to economy of space quite start- word with the grocer-boy or the waterling to us New Yorkers. Nor does an carrier without the possibility of undue examination of a number of plans of familiarity. No speaking tubes, no apartment houses lately erected in water or steam pipes to pierce the floors Paris show much of that Yankee inge- and establish a communication from Our kitchen had not tects to put two rooms 12x16 in a space even a dresser, but a plain cupboard let Tox12. Two sets of plans prepared for into the wall. There was a sink, but Mr. de Navarro by well-known French no water supply, every drop we used architects, and which we eagerly exam- having to be bought from a waterined with the hope of finding useful carrier, who brought it up in pails. No help in the planning of the Navarro bath-rooms, that is, yes-there was a buildings, proved so absurdly wasteful small room tiled with brick like the in the use of land that they were abso-kitchen and called "the bath-room" unadapted to the number of stories we any form, and the tenants were expected had to build, were noble works of art to furnish a portable bath-tub. As to in their way. Our apartment consisted the water-closet arrangements, they of seven rooms, the same number as in were certainly in this case of a most unique character. A stone tower some and with this immense difference that 10 feet inside diameter and built some every room had at least one window on 12 feet away from the house, was conthe free open air, and so managed as nected with every landing by a light regards angle or distance from other covered bridgeway. Inside the tower, windows that it might be kept wide and on every floor, was a small privy so arranged that the matter fell directly down into a vault below, without ever touching the sides. Where or how this vault was emptied we never inquired, but, strange to say, the thing on the whole worked well and certainly did away with all plumbing bills.

Now, a word about the occupants. The ground floor on the right of the entrance was occupied by our friend, the portier, with his shop on the front and living rooms in the rear, and by the family of the piano-maker, who had his shop in part of the stables in the rear. To the right were the vestibule but in small private dwelling houses, built and stairs and large reception rooms on one level on the top of one another and forming part of the first floor (second floor with us) apartment, but which

had not been opened or used for many years. On the first floor lived Monsieur, whose apartments took in the whole floor. Monsieur, who was always referred to by the old portier with a mixture of awe and loving familiarity, owned the house and belonged to a very old and it seems very grand family (not titled) in Brittany. He was a splendid-looking old gentleman, plainly dressed, and withto accept favors from any but a legitimiste government; a renunciation that the portier seemed much to admire, rather inconsistently we thought, as he himself was a rabid red-Republican. Monsieur's fortune was much reduced, and he now kept only one carriage and two horses. The way he stepped aside and bowed to any woman he met on the stairs, was worth the rent of an apartment, and his treatment of the toy-maker's wife, who lived on the top floor, was precisely the same as that he accorded to the ladies of the wealthy people on the second floor. On the second floor were two apartments occupied by people of some wealth who were very seldom seen or heard. On our floor, the third, lived a doctor, his door bearing a plate to that effect, and being provided with a small peep-hole opening, strongly barred with iron, to enable him to ascertain the character of a visitor if called upon at On the fourth floor lived a night. retired army officer, and a widow with a pretty daughter, and a son employed in some government office. The fifth and top floor was divided into four holdings and was rented to poor people, one of whom was a toy-maker, who manufactured a mechanical doll, a specimen of which he was allowed to exhibit in a small glass case near the main entrance door. There were several children on that top floor, but they were seldom seen or heard.

The income of the house as per notes taken at the time was as fol-

lows:

The piano-maker on the ground	
—shop and living rooms, I francs	
The first floor, Monsieur's ar	oart-

\$200 00

brought the enormous sum of 6,000		
francs	1,200	00
The second floor, two apartments, at		
1,500 francs each	600	00
The third floor, two apartments, at		
I,000 francs each	400	00
The fourth floor, two apartments, at		
750 francs each	300	00
The fifth floor, all told, about	200	00
	\$2,000	00

The apartments were seldom empty; out any decorations, he having refused most of the tenants had lived there for years, and loss of rent through nonpayment was unknown—in fact, people could not move away without first paying rent. To the people on the top floor Monsieur was very good, his orders being that in case of sickness or trouble the rent should be reduced or remitted. The portier, who was born in Monsieur's family, took charge of everything, renting, collections, repairs, etc. All Monsieur did was to receive his money, which, we were proudly told, he always put in his secretaire without ever counting it.

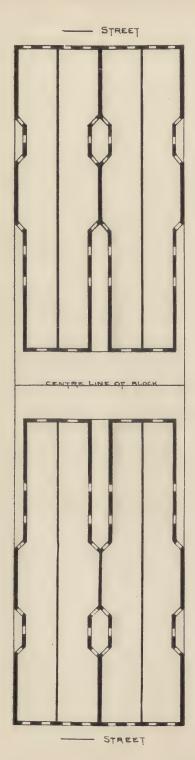
The running expenses were:

The portier's wages, 600 francs	\$120	СО
Sundries, for repairs, etc., which for		
that year amounted to only 325		
francs	64	CO

The tenants all attended to internal repairs. The taxes, the amount of which we unfortunately cannot give, the pencil figures in our note-book being illegible, we remember seemed to us at the time almost absurdly small.

If we consider the comparatively low price of land and building, the durability of the structure—which is good for several hundred years-and the fact that no expense is incurred for fuel, water, carpeting or decorations, and comparatively none for service, repairs, agent's fees, etc., we will understand how the French can afford to devote a hundred feet frontage to a house whose entire rental, if fully occupied, does not exceed \$2,900.00; and how people of very modest means can afford to occupy apartments which, as regards light, air and privacy, would be accessible only to our wealthier classes.

It is evident that our French flats (the name of which, by the by, is a strange misnomer) have little in common with the apartments we have just



described. Our buildings and our mode of living in them are entirely our own; and the rapidity with which we have rushed into this new mode of life amounts to a social revolution that we cannot regard without serious forebodings. Street after street of our beautiful up-town neighborhoods are being built up with solid blocks of fine fivestory houses, 25 feet wide and with two and even in some cases three apartments on each floor. When the street is built up on both sides this gives us twenty families to every 25 feet of street. Think of it! Over four persons to every foot-over eighteen hundred to every block, if fully built up.

The accompanying diagram, showing air space and positions of windows, taken from a block over 200 feet long, solidly built up in the same manner, excepting one house on one street, may give some idea of what we

are coming to.

Only 10 feet are kept open in the rear of each house, making 20 feet between the two; the air-slots between adjoining houses are 5 feet wide, the air-wells are six by eight. There are two apartments on each floor and therefore only one room; the front parlor has a window that is not gazed into by several other windows; the small kitchen in the rear is next best off, for its window is 20 feet distant from that facing it. All other rooms are looked directly into by other windows not over 5 feet distant, and these rooms are sleeping rooms! Can we be surprised if such buildings rapidly degenerate into ordinary tenements; and if our upper middleclasses are constantly migrating to new neighborhoods, which soon follow in the general downward course? Where is this to stop? Are we wasting millions in the building up of a city so radically defective in plan and construction, that a few decades will find it honeycombed with squalid tenement districts, ever spreading and ever tending towards lower depths of fetid degradation? We know that the spirit of our people and institutions is opposed to legislative interference, but we must remember that restrictive laws and the devoted efforts of a few gentlemen connected

horrible to describe. How far the sup- advantages, and the must insist on a reasonable amount of ficial area. open space between buildings, and esmorals and decency. Unfortunately, ventilation.

Nothing short of a law forbidding the erection of walls, with windows or openings of any kind within to feet of the line of adjoining lots, would in any way meet the case. This would not prevent the building of blank walls, but City and should be extended to side walls.

With the arrangement of our blocks making our lots only 100 feet deep, it seems very doubtful whether buildings deeper than the private houses for which they were intended are advisable. Barring the case of public and business structures where the whole surface of the land must often be covered, an open streets should be insisted upon in the rear of buildings intended for habita-This would, of course, make the building of apartments in flats on one level impossible on a single lot. In *This law, which, in this office alone, caused the abandonment of projected buildings involving an expenditure of over five millions of dollars, seriously checked the prostory apartments—that is, complete two-story houses set on the top of one another. Eight fine rooms and bathroom may thus be obtained as well-lighted and ventilated and as private *This law, which, in this office alone, caused the abandonment of projected buildings involving an expenditure of over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress of this city and would have virtually put an end to do over five millions of dollars, seriously checked the progress

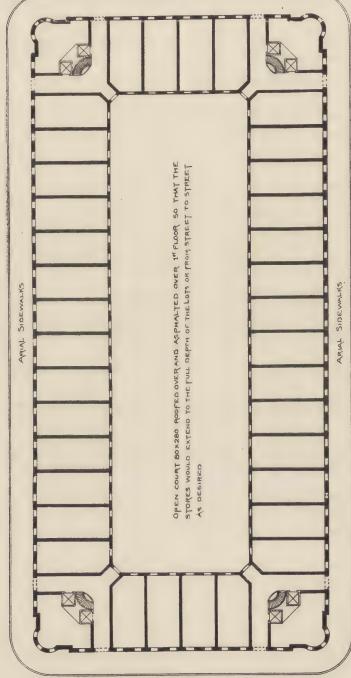
with our Board of Health have alone as in any of our old-fashioned private saved us from a state of things too houses. This arrangement offers many question posed rights of property-owners can whether, where the enormous price of and should be interfered with is a se- land makes it necessary to have a large rious question, but one thing is certain: number of apartments on a given space, if we would not make this city unfit for it is not better for us to extend in moral and physical health, we must put height and to retain ample open courts a stop to the use of dead air-wells; we than to cover 78 per cent of our super-

We have before us the plans of a propecially we must take into account a jected building which, if erected, would, thing that our laws have not as yet we think, have been an interesting considered: we mean privacy. Sleeping study. They were prepared for the rooms, the windows of which are in site now occupied by the Madison such close proximity that every act and Square Garden, upon which the late W. every sound may be seen or heard by H. Vanderbilt had given us a most libstrangers, are subversive of common eral option for several months. Over a million of dollars had been subscribed even a semblance of privacy cannot be for the enterprise, and its abandonobtained without sacrifices far greater ment was due to the passage of the than are required to secure light and high-building law, which made the erection of the structure sible.*

The idea was to erect a building thirteen stories high, covering the whole block, and consisting of six layers of small two-story houses, each 22x 50 feet, and set one on the top of anwhere windows are set in the walls of other, and stores on the ground floor; two adjoining houses it would insure a this gave us, besides the stores, six laydistance of 20 feet between them. ers of forty houses each, or 240 houses This law already exists as regards the in all. Aerial sidewalks of the usual rear of apartment houses in New York width were set on every alternate floor, and gave access to the parlor floor of each house, and two huge elevators set at each of the four angles of the building took the people up and down.

The sidewalks were 14 feet wide, but only took up to feet on the lots, as we hoped to be allowed to extend 4 feet over the areas in the form of balconies. The vast court, 80 feet wide, was to be space about equal to the width of our further ventilated by a number of arches pierced through alternate stories, as we did with the Navarro buildings. The ventilation obtained by means of





26" STREET

MADISON AVE

these arches is perfect—lifts set be- a house on Twelfth street, near Second people to reach every kitchen. This and improvements less so? separate and individual home.

to the erection of buildings that we thrown out on the sidewalk. reasonably be expected to last? constant changes bring upon his house, Are we not too exacting in our de-waits and waits, hoping against hope mands for modern conveniences and for several months, until at last the house we have tried to describe is as his own score and rents are lower. plain as a storage warehouse; it is devoid of almost all our cherished mod- tions that press upon us we must leave turies, and the apartments within its the clear-minded sagacity of our people rugged walls are separate, individual will soon adapt our laws and customs homes-not what we term French to the requirements of a mode of life so flats.

of taxation, which now seems to fall voidable. exclusively upon real estate, be de-

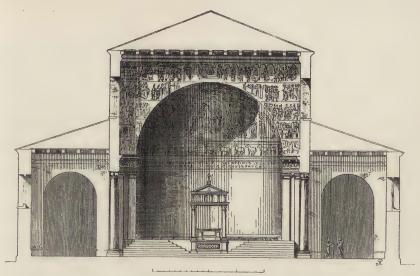
tween every two houses and going avenue. Would it not be better if down to the basement enabled trades- vacant lots were taxed more heavily aerial sidewalk arrangement, by mak- would discourage the persistent holding the public access to the houses ab- ing of land for speculation, and ensolutely open and free, carries out to courage the erection of good permathe utmost the French idea, that the nent buildings. The fact that our public hall and stairs are a mere con- laws and customs leave landlords virtinuation of the public street, and that tually at the mercy of such as desire to each apartment is in all its essentials a live rent free while honest tenants are taxed to make up for the loss is one of But we are going far beyond the the causes of our enormous rentals. limits of a magazine article, and have True, tenants are usually made to pay barely touched one of the many points in advance and can easily enough be of vital interest that affect the ques- ejected for non-payment of rent, and tion. What about construction? Is this is hard enough on poor folks who it not time that we should put an end dread seeing their goods and chattels know will have to be taken down begentry we refer to have little to fear fore the expiration of fifty years? from such treatment; they pay the Is a brick and iron fire-proof building so. first month's rent, and possibly the very much more expensive than a lath- second, and then stop, and the landand-plaster structure if we divide its lord, fearing empty apartments, and cost by the number of years it may the wear and tear and discredit that for ornamentation? If economy be tenants march off highly indignant, an absolute necessity, had we not and have their fine furniture (which better do with less plumbing work, always belongs to some other party) less steam heat, less electric bells, an-carefully removed in patent spring-nunciators, regulators, etc., etc., and vans to new fields of plunder. In a with less ornamentation in the way of Parisian house not a stick of furniture, terra cotta, stone carving, porticoes, no matter by whom owned or claimed colonnades, projecting cornices, sham (except we believe a poor man's bedturrets, sham mosaic, sham fancy glass, ding and the tools actually used in his cheap carpets, frescoes and other emcraft), can be removed before the rent bellishments, and have a little more is paid. Hence people live more acair, light and privacy? The old French cording to their means, each man pays

All these and a host of other quesern conveniences, but it has stood and to the thoughtful consideration of abler will stand, if not disturbed, for cen- men, and we do so, in full assurance that peculiarly suited to our circumstances Cannot some change in our system that its general adoption seems una-

As to the planning and construction vised, and help reduce our enormous of the required building we may safely rentals? A relative of ours lately paid trust the skill of architects, who, befor the rent of a pretty house in Kensides the advantage of their Yankee sington, London, precisely the same endowments, have had their wits sharpamount as we had to pay for taxes on ened by the planning of two sevenroomed apartments, on lots 25x100, and have evolved the marvels of convenience, taste and ingenuity to be found in so many of the very French flats we are criticise. Give them space, give them

Hubert, Pirsson & Hoddick.





CROSS SECTION OF S. M MAGGIORE IN THE TIME OF SIXTUS III.

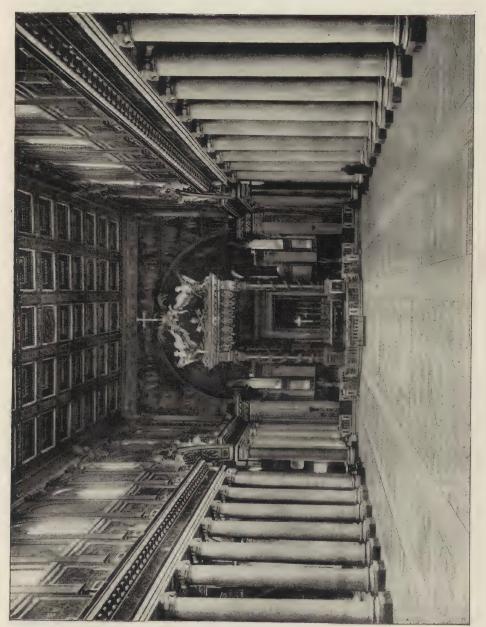
THE BASILICA OF SANTA MARIA MAGGIORE.



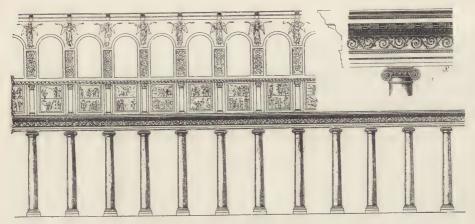
Esquiline Hill. lous origin, came afterwards to be called It is true that it is not easy to say

NE August night about the cost of John, "juxta Libiæ Macelthe year 355 or 360, so lum," hard by the meat market of Libia. the legend of the as the historians say, on the site of the church tells us, Libe- private basilica of one Sicininus, and so rius, Bishop of Rome, was called at first only the Basilica known in later history Sicinina. After the death of Liberius as Pope Liberius, was visited in a dream it was called the Basilica Liberiana, by the Virgin Mary, who ordered him which is still its official title, for the to build her a church upon a spot which story of the miracle and the name which he should discover in the morning is derived from it were not in common marked by a covering of new-fallen circulation till some centuries later. snow. Early the next day messengers The church so founded, the earliest brought the wonderful news that fresh important church there dedicated to snow, fallen in the summer night, had the Virgin, has been conspicuous in the covered a space on the summit of the history of Rome; it passed through Presently a wealthy many transformations and a variety of patrician, of whom we are only told names before it became universally that his name was John, and that he known as the Church of Santa Maria and his wife had wished to dedicate a Maggiore. No church in Rome, after church to the Virgin, came to announce the Lateran and St. Peter's, has held so to Liberius a vision like his own and large a share of public veneration, has his desire to carry out the Virgin's been more honored by the Catholic command. The Pope and the patrician Church herself, or so splendidly adorned went together to the place of the miracle and maintained to this day; perhaps and there in the surface of the snow none at all retains so much of the marked out at once the plan of the aspect of the great basilicas which saw basilica, which, in memory of its miracu- the early triumph of the Roman Church,

the Church of St. Mary of the Snows-how much of the church of Liberius is Santa Maria ad Nives. It was built to be seen in Sta. Maria Maggiore under the authority of Liberius and at to-day, and we can more safely say that



S. M. MAGGIORE, -INTERIOR OF THE PRESENT CHURCH.



LONGITUDINAL SECTION OF S. M. MAGGIORE IN TIME OF SIXTUS III.

it still shows within, in its chief parts, mined to signalize it by restoring the its main structure, perhaps not greatly, early history of the church.

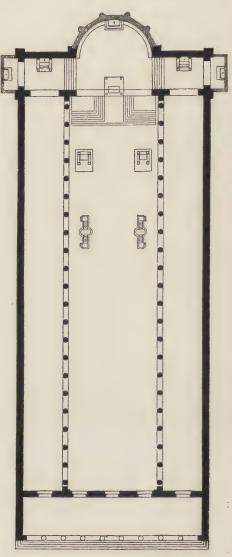
with the prevailing doctrine, deter- occasionally by other apses opposite

the form which it had after its restora- basilica, and dedicated it to St. Maria tion by Sixtus III. eighty years later. Dei Genetrix, the first, as I have said, We do not know how much he altered and the greatest of the churches dedicated to her in Rome. Among the four but we may believe that it was in need early basilicas this one is singular, the of restoration when we consider what only one which has single aisles, the went on in Rome during the fourth and aisles being double in St. Peter's, St. fifth centuries. No sooner, for instance, Paul's and the Lateran Church. In had Liberius died in 366 than it suffered this, no doubt, Sixtus preserved the in one of those bitter schisms which early form of the church, and also in surprise the reverent inquirer into the the round apse which closes the end of the nave, and in which the windows The Athanasian controversy which were cut some centuries later. Whether had troubled the pontificate of Liberius he found or added the small transept, was renewed in the struggle of Dam- which subsequent alterations have as it asus and Ursinus for his vacant epis- were obliterated by walling off the arms copal chair. This led to a factional from the choir, it is not easy or very fight so furious that the Prefect of the important to decide definitely. We City was driven to take refuge outside may remember, however, that all the of the walls; and when the election of great Roman basilicas of the fourth Damasus was verified his party attacked and fifth centuries had transepts, unless the followers of Ursinus, who were met it be S. Lorenzo fuori le mure, which for protest and defiance in the church was also rebuilt by Sixtus, and whose of Liberius. They set fire to the doors original form is very much disguised by of the church, climbed upon the roof, the changes it has gone through. We which they tore open, and hurled its may note also that in the early churches tiles down upon the people within. At of Rome there was no intersection of the end of the fight 137 of Ursinus's nave and transept; but that the tranparty lay dead upon the floor of the sept was a cross-wing against which church. In the time of Sixtus III. it the nave and aisles stopped as abruptly was the Nestorian controversy that as against a dead wall; though the wall divided the church; and when that was in fact pierced with great arched heresy was set at rest by the counsel of openings. This formed not a cross but Ephesus, which declared the Virgin to a T, the transept being broken only by be the mother of God — Θεοτόκος, an apse set opposite the triumphal Deipara—Sixtus, identifying himself arch that opened into the nave, and

a central square, was developed pretty But for that we should have here the early in Lombard architecture, and in a sort in Byzantine, but the conservative Romans did not soon accept it. After the helpless syncope of art in Rome in the tenth and eleventh centuries, they imported it from without, with the other forms of mediæval art, in the revival of the twelfth and thirteenth. The earlier or Roman form has, nevertheless, been known in ecclesiology as the crux commissa, meaning the T-shape, in distinction from the crux immissa, or genuine four-armed cross.

The accompanying figure shows the plan of S. M. Maggiore as it was at least after Sixtus III.; but we may fairly suspect, from the analogy of the other important churches of the first centuries of Christendom, that it had before it from the beginning an atrium or open court surrounded by colonnades, with the usual fountain or basin for ablutions in the middle. The dimensions of the basilica were large. The nave, 230 feet long by 55 in clear width, is as ample as the largest in the great mediæval cathedrals, though not so lofty, being only some sixty feet high. Whoever enters it to-day sees it essentially as Sixtus saw it. Its multitudinous marble columns, said to have been taken from the temple of Juno Lucina, carry, not the arches that we commonly look for, but a straight entablature whose lines, broken only once on each side by a modern arch, lead the eye away down to the great triumphal arch and round its imposts. The Ionic order is of classic proportion and detail, the entablature rather light and the frieze decorated with arabesques in mosaic. Here for once we have an interior of classic type which, loftiness apart, more than competes with the great Gothic interiors in effect of mularcades would allow, seem countless; continuous, thoroughly nice and coffered ceiling, and in the its impressiveness.

the aisles. The cruciform church of marvelous impression of scale, distance the Middle Ages, as we know it, where and majesty. The only dissonance in the nave and transepts interpenetrate this harmony is the interruption of the and cross, forming four arms joined in entablature by the modern arches.



GROUND PLAN OF S. M. MAGGIORE

tiplicity and far-reaching perspective. one unexampled instance of a church The columns, much closer spaced than interior purely classic in design, simple, harmonious the long lines in the entablature, cor- and, in spite of its monotony, unique in

Alexandrine pavement, the very low- The deliberate retaining of the enness of the nave, all help to give a tablature in certain of the most import-

as the embodiment of conservatism, acter, learning and art declined among the entablature after the time of Dio- nities they held to their conservatism. cletian. But in those days the East Constantine had found a great body of was the progressive branch of the Em- Christians in Rome, mostly, it is true, barbarians, developed its polity, its society and its arts with the freshness of observance, it was long before even the own energy, first under the Gothic ways of thinking and feeling. Rome sat apart, uninfluenced by the nial. new life that was stirring about her, It is clear that the older and conseher population unrenewed and gradu- crated form of architecture was preally wasting under oppression, violence, ferred by the early Roman Christians pestilence and famine. Only her hier- to the new; the entablature was more archy gained in authority and wealth, in honor than the arch. It is likely while everything else decayed about that when they first lined their naves it. Again and again the floods of inva- with arcades instead of colonnades sion threatened to overwhelm her; economy and ease of construction were now and then they surged up to her their determining motives. Their megates and fell back. Four times her chanical skill had already deteriorated enemies burst in and pillaged her, and it was easier to turn plain arches stripping her of an incredible amount than to cut entablatures. When they of accumulated wealth; yet they did had an excuse to plunder a heathen not fasten upon her, but hastened away building they could supply themwith their booty. The awe or rever- selves not only with columns, but with ence with which for ages she had in- the rest of the order, and repeated edicts spired the outside world had twice of the later emperors, and even of the turned back Alaric before he finally Gothic Thedoric, for the rescue of the abased her; and, aided by the eloquence old buildings from destruction show and venerable bearing of Leo the that the reverence of the people for the Great, had even held the arrogant and ancient monuments did not keep pace savage Attila at a distance. It would with their attachments to the ancient seem that something of this reverence forms. It would appear, too, that first impulse of their violence was example of destroying the old for the spent, made them uneasy within their building of the new, for there are few herself in her humiliation. So she spicuous parts are not built out of lived in virtual isolation through the old materials. But the opportunities their offerings and went away. Her umns could be stolen from distant

ant buildings of christianized Rome at pontiffs gradually extended their spiritthe time when the arch was elbowing ual authority throughout Christendom, it out of use throughout the rest of the rooted their temporal authority, and world is a singular sign of the conser-vatism of Rome. Even in the Eastern her shrines. But little new blood came Empire, of which we are apt to think into her population: numbers, charwe find almost no traces of the use of them, and like all decadent commupire and Rome the backward. While among the lower classes; and though the Empire of the East, founded by his imperial promulgation of their religion made a great change in external a new state, in the northern parts of ancient worship was smothered in the Italy the German conquerors, settling city, longer before the upper classes themselves among the Italians, gradu- ceased to be secretly devoted to their ally renewed the population and trans- paganism, longer still before the formed its habits. They infused their Roman people radically changed their monarchy and then under the Lombard, centuries their old superstitions clung rapidly reforming the arts which their to them; their attachments to their old inroads had nearly destroyed. But institutions, manners, arts, were peren-

returned upon her conquerors after the Constantine and his bishops set the walls and drove them to leave her to early churches in which the condark ages, as Mecca or as Jerusalem for the despoiling of old buildings lives now. Pilgrims flocked to her, left were not unlimited, and while coltablature.

Above the order the walls of the nave have lost something of their old and clerestory window being filled up and replaced by a modern painting, while an order of Corinthian pilasters set between them repeats and continues the dignity of the architecture. the lines of the columns below. But although added at the beginning of the even after the pillage of the Goths, sixteenth century, doubtless renews very much the effect of the original one, while the upper order with its cor- church kept on accumulating wealth, nice and frieze is at least harmonious repairing her losses. Her population with the effect of the lower part.

still the series of mosaic pictures in were adorned with a luxury which square panels not much spoiled by sounds fabulous to us. We are told later restorations with which Sixtus that Sixtus furnished the altar of Sta. filled the space between the lower order Maria with a scypus or chalice of gold and the clerestory, leading up to the which weighed fifty pounds, and overgreat group of mosaics that surrounds laid it with 300 pounds of silver plates; the triumphal arch. These show how silver stags spouted water into the early a consistent scheme of icon- font, or the basin for ablutions. At the

towns it was not so easy to bring whole ography was arranged for the decoraorders. Columns were indispensable, tion of the church. The mosaics on but architraves and cornices were not. the walls of the nave represent in the So while it is apparent that the main a series of scenes from Old Testagreater honor attached in Rome—and ment history, the prophecies and forein Rome only—to the ancient form, runners of Christ. Those about the we find the use divided between arch show the story of his birth and that and the arch. In the old basilica infancy—the Annunciation, the Presof St. Peter's, pulled down at the be-entation, the Adoration of the Magi, ginning of the sixteenth century by the Massacre of the Innocents. They Bramante to make way for the modern are among the most interesting in Rome, church, and in the round church of S. as they are among the earliest. Late Stefano, the nave was lined with great classic in style, showing the rather colonnades bearing entablatures, while stumpy figures of the reliefs of Trajan's the double aisles were separated by column, they yet have a freedom of smaller columns with arcades. The drawing and invention and a skill in contemporary basilicas of St. John execution which were lacking in the Lateran and St. Paul's outside the walls mosaics of the following centuries. were arcaded throughout; our Sicinian Over the arch is the simple inscription or Liberian basilica showed the entab- "Sixtus Episcopus Plebi Dei." The lature; so did somewhat later the ambones which stood on each side of churches of S. Lorenzo without the the nave near the choir, and the two walls, St. Maria in Trastevere, S. Criso- ciboria that flanked the entrance to the gono, S. Martino ai Monti and Sta. choir are gone; the baldacchino that Prassede, while in the lesser churches stands in front of the arch of triumph the arcade was usual. That the entab- is modern; a modern tomb on each lature was used with effort is shown by side of the entrance closes the first the fact that usually the architrave is intercolumniations of the nave, yet the relieved by bearing arches hidden, or interior is singularly harmonious. The meant to be hidden, in the frieze, or as warm tones of the marble columns, in Sta. Prassede, above the whole entinged by age and by the smoke of innumerable censers, the marble pavement, the rich coloring of the mosaics and paintings, with the quiet tints of the probably plainer aspect, each alternate architectural members, enriched here and there with gilding, the whole roofed by the gilded beams and gray panels of the ceiling, add a sober splendor to

The gifts which Sixtus III. added to the square paneled ceiling, with deep his church illustrate one of the singular coffers and carved and gilded beams, phenomena of Roman history-how, and while the decline and depletion of the city were steadily going on, the was wasted with want, and sometimes The most characteristic adornment is at starvation's door, but her shrines

same time the Emperor Valentinian twelfth century. It is also true that gave to St. Peter's a golden relief representing Christ and the twelve apostles, and to St. John Lateran a silver tabernacle. Perhaps it is not strange that one barbarian sacking of Rome was followed by another, that if the Arian Goths had respected the orthodox shrines, the Vandals should have spared none, but loaded themselves alike with the gilded tiles of the temple of Jupiter, the spoils from the temple of Jerusalem, and the furniture of the Christian shrines, or that St. Jerome should declaim against the luxuriousnes of the churches and their services in his day.

It is only in the nave that the original character of the basilica is preserved. The tunnel-vaulted aisles, faced with Ionic pilasters, and the groups of chapels that lined them, are Renaissance; the main apse or tribune, with its pointed windows in mosaic, speaks chiefly of the short period when the Gothic fashion prevailed at Rome. But it is seven hundred years after the time of Sixtus III. that we next find a definite account of important changes in the church, though meanwhile, perhaps in the seventh century, the belltower was built on the right of the main entrance, where, added to in the thirteenth century and again in the time of the Renaissance, it now lifts its four variously arcaded upper stories and its pointed roof over the main façade—the highest tower in Rome.

Eugene III. found time during his troubled pontificate, from 1145 to 1153, in spite of his struggles with his republican rebels, to restore St. Maria Maggiore and considerably modify it. He built a new front with an open portico resting on eight coupled columns of granite. Antiquaries have insisted that the Romans, with that fondness for past ways which I have just discussed, reverted again during the later Romanesque period to the classic entablature. It is certain at least that the porches added to churches—S. Giorgio in Velabro and S. Lorenzo fuori le mure and some others—are built with an entablature in classic form instead of the arcades which were elsewhere universal none of these porches is older than the not have been executed at a date much

but for some bell towers of Lombard aspect and some one or two old arcaded cloisters, all of which may belong to the seventh, eighth and ninth centuries. and the later apse of one church, there would hardly be any evidence that the Lombard Romanesque, which took possession of the north of Italy, ever found its way into Rome. An old print cited by Letarouilly shows that the portico of Eugene, like the porches I have just mentioned, had an entablature and not an arcade. A more extraordinary thing, which does show the influence of the contemporary style upon the revival or continuation of the old one, is the coupling of the columns in a colonnade, a thing unknown in ancient art, hardly to be found in the Renaissance, and looked upon as an innovation when it was introduced by Perrault in 1665 in his famous colonnade of the Louvre.

In truth, during the period of most rapid development of Romanesque architecture, the eleventh century and most of the twelfth, Rome, impoverished, unpeopled, and entirely given up to the evolution of her church, did almost no building of which we have record. If we may believe the writers of a somewhat later time, she had sunk to the lowest impotence in literature and art. It is likely that being provided with churches to suit the larger population of earlier days she had no occasion to build them, and there is abundant evidence that many of those she had were allowed to fall to dilapidation, and were from time to time rudely and hastily restored only to keep them from tumbling to pieces; or the favorite church of some dignitary was enriched by a small addition, or adorned with mosaics or a new shrine. But this was all. Such conditions favored, not progress, but conservatism and even retrogression. The porticos which I have mentioned and which are the characteristic monuments, perhaps the only ones, of Roman architecture at this period, are altogether classic in general form, and might easily have been believed by their builders irreproachably so in all respects. Yet they during that period. It is probable that show on examination that they could assigns them. design and in mechanical skill, leading more or less abbreviated: up to the finished work of the Cosmati, and culminating in the cloisters of S. thalamum in quo Rex Regum Stellato John Lateran and of St. Paul's, or out- sedit solio; and below this: side of Rome in the porch of the cathedral at Civita Castellana.

At the end of the next century, about raised to the crown which he has just ment. set upon her head, and are divided by Of like character with the mosaics of a border of stars from the rest of the the apse, and almost the same date, are

earlier than that which their history composition. About them crowd ranks The ratio of the col- of angels, behind whom modestly umns to their load, the proportions and kneel on either side Nicholas and in some degree the form of the details, Cardinal Colonna, who shared the cost betray the influence, very likely then of the decoration with him, overtopped unrecognized, of the work that went on by the towering figures of the patron outside of Rome. They give evidence saints of Rome, and of the two Johns, of a sort of revival in the twelfth cen- the baptist and the Evangelist, and betury, whose rude beginning shows into hind these again the newly-canonized what decadence the Roman architecture saints, Francis Assisi and Anthony of had fallen, but which advanced both in Padua. Beneath is the inscription,

Maria Virgo Assumpta est ad etherium

Exaltata est sancta Dei Genetrix super choros angelorum ad coelestia regna.

The mosaic is remarkable for various 1290, Nicholas IV. rebuilt, or at least reasons. It marks, as I have said, the redecorated, the apse of St. Maria culmination of homage to the Virgin, Maggiore. By this time the Gothic and is perhaps the earliest representawave had overflowed Italy, and even tion of this conception that exists. It Rome yielded so far as to admit the is interesting to compare it with the pointed arch. Pointed windows were corresponding mosaic, a century and acut in the apse, which are still to be half older, in the dome of the apse of recognized on the inside, and it was the other great early basilica dedicated covered or re-covered with mosaics, to the Virgin—S. Maria in Trastevere. These had been a specialty of Rome There again Christ and his mother are ever since they were invented, and enthroned side by side; but the son sits pictorial mosaic had been specially with his arm about her shoulder, and fostered by the church. It had sunk with no emphasis of the crown, as if with the other arts in the ninth and the enthronement were the event portenth centuries and risen with them in trayed, and the crown simply a part of the twelfth. Nicholas marked his short the costume supplied by the painter. reign by the mosaics with which he The mosaic of Sta. Maria Maggiore lined the apse of the Lateran and shows the advance in design and exe-Liberian basilicas, the finest works of cution due to the interval. From these their day. Both were the signed work figures the classic attitudes have enof one artist, Jacobus Torriti, a Francis-tirely disappeared, though something can monk, of whom only these works of classic breadth still lingers in the are known, but who is not to be con-draperies, but the upper part of the founded with the painter of the same conch or dome is occupied by araname to whom are due the earlier besques on a large scale singularly mosaics of the Baptistery at Florence. classic in design. It is easy to conjec-We may guess him to have been his ture that the enormous acanthus leaves The central composition from which they spring, and the dense here represents, in due sequence with reversing coils of heavy foliage, in the older mosaics of the nave and the which figures of birds are enveloped, triumphal arch, the crowning concep- are parts of the older decoration of the tion of the cult of the Virgin—the In- apse preserved from the fourth or fifth coronata. Colossal figures of Christ century, while the borders of the dome and the Virgin occupy a great disc on and of the pointed windows, though the back of the dome. They are seated still composed of classic motives, are together on a throne, his hand still distinctly mediæval in scale and treat-

those added at the end of the thirteenth builder of the Ponte San Sisto and the teenth century, telling with great ani- have been swept away to make room mation the story of the foundation of for later and more splendid additions. the church—the vision of Liberius and later days.

These ile, as it has which I have spoken, and the upper instability of Gothic influence upon the dict XIV. architecture of Rome. The great cent Sixtus IV. of unsavory history, 75 feet each way in size, the centres

century to the old front above the por- famous Sistine Chapel of the Vatican, tico and fortunately preserved when adorned the church with splendid furthe front was remodeled and the present nishings, of which perhaps the only reloggia built over them. They repre- mains are the four columns of porphyry sent in a broad upper band great fig- that to-day support the modern baldacures of Christ enthroned with the Virgin chino over the high altar. He added, and Saints on each side, and below these through his French Cardinal D'Estoutefour characteristic scenes, framed in ville, arch-priest of the church, a chapel Italian Gothic architecture of the thir- which was probably among several that

At the end of the fifteenth century, that of John the patrician, the recep- while Columbus was discovering Amertion of John by the Pope, and their ica, Alexander VI.—the second and identification of the site, under an last Pope of the Borgia family and abundant but circumscribed snow-storm father of that precious pair, Cæsar and sent down by Christ and the Virgin Lucrezia-made Giuliano San Gallo inclosed in an aureole above. The replace the ceiling of the nave with upper band of mosaics is signed by that which we have described. His-Philippo Rusuti, of whom again only tory is full of unexpected juxtaposithis work is known; the lower ones are tions, and one of these surprises us attributed by Vasari to Gaddo Gaddi, when we are told that the first gold who also, it is said, added a range of brought from the New World, given to small mosaics below those of the conch the church by Ferdinand and Isabella, of the apse. These are all contribu- is spread over the gilt beams of this tions by Cardinals Jacopo and Pietro ceiling. Sixty years later Michel-Colonna, of a family which cherished angelo began, for Cardinal Guido Asthis church and much adorned it in canio Sforza, the chapel on the right of the nave, still known as the Sforza are the last considerable chapel. He and the Cardinal died in changes in the church itself of which the same year, 1564, and the chapel we have record until the days of the was carried out for Cardinal Alexander, Renaissance. Within a dozen years— brother of the first, by Giacomo della in 1309—began the Babylonian ex- Porta. The design of the chapel was been called, of modified, it is said, in the after executhe popes to Avignon under Clement tion, but the singular and extravagant V. Seventy years later, when Gregory plan is probably due to Michelangelo, XI. brought back the papacy to Rome, whose unruly genius tended, in archihe rebuilt or built up the bell-tower of tecture, to the far-fetched and the bizarre. It had an enriched façade tostories which he added, with round ward the nave, but this was taken down, arched arcades above pointed ones, may probably with advantage to the nave, count as a symbol of the brevity and in the later restoration under Bene-

Of the other chapels that line the churches of Rome seem to have fallen aisles two are of special importanceinto neglect and dilapidation during the the Capella del Presepe and the Borghese exile, and to have but slowly recovered. Chapel, the chapels of Sixtus V. and It is a curious coincidence that the Paul V. These twin chapels stand on three popes who since the establishment opposite sides of the nave, and though of the church by Constantine have at to the vast basilica they are but side long intervals borne the name of Sixtus chapels, they are on a scale that would are all associated with this basilica. do for churches in these degenerate The next we hear of it is that a hundred days of scattered worship. They are years after Gregory XI., the magnifi- Greek crosses in plan, measuring some

covered with domes of about 40 feet span. They are about 65 feet high to the crown of the vaults which cover the arms, 130 to the top of the domes inside, and 160 to the summit of the lanterns without. Though built twenty-five years apart, and by different architects, they are alike in design, with some differences of detail. A great order of Corinthian pilasters, half as high again as the main order of the nave, surrounds each of them within, carrying the vaults that cover the arms of the cross, and the pendentives which bear the domes. The two drums, octagonal on the outside, are pierced with pedimented windows in the intervals of an upper order of pilasters upon which the domes rest. It was to give importance to the approach to these chapels that the colonnades each side the nave were broken, the entablatures interrupted, and two columns on each side spread apart and set close against their neighbors* so as to open two broad arches rising to the level of the clerestory window-sills. This is, as I have said, the only serious injury done to the original design of the nave; and it is serious, for it is to the grand lines of the entablatures, continued even round the imposts of the triumphal arch, and to its serried ranks of columns, that the nave owes its majesty. These are broken with an abruptness that shocks the eye, and by arches which yet look insignificant beside the triumphal arch.

The two chapels are finished inside cessor Pius V. with an amazing sumptuousness of varied marbles, sculpture, gilding and painting; their design and proportion are elegant. The earlier one, the Sixtine, was begun by Domenico Fontana for Sixtus V., when he was Cardinal Montalto, and wished a shrine of great splendor to receive the manger of Christ. This had been brought from Palestine with the remains of S. Jerome by Theodore I., when he came from Jerusalem to St. Peter's chair, and had been preserved in one of the older chapels. The lavishness of this undertaking cost the Cardinal his allow-

ance from the papal revenues; for the Pope, Gregory XIII., declared that a Cardinal who could venture on such an undertaking must be rich already. The work would have been stopped, says Milizia, if the architect had not devoted his own savings to keep it going. Fontana had his reward when the Cardinal became Pope Sixtus, being appointed with Della Porta to carry on Michelangelo's design for St. Peter's, and he speedily finished the chapel in Sta. Maria Maggiore, with even more splendor than he at first intended.

The five boards of which the manger consisted are deposited below the pavement in the middle of the chapel of Sixtus, under a magnificent shrine. The little chapel in which they had been preserved was some twenty yards away from their present position, and Sixtus, as solicitous for the traditions of the church as he was imperious, insisted that the old chapel should be moved bodily with the precious relic in it to its new place. His faith in Fontana's engineering ability had been fixed by the skilful placing of the obelisk in front of St. Peter's; and the little building, with its walls and vaults laboriously braced, crated in a great frame of timber, and slung by a complicated system of ropes, was moved to its position and lowered to its new level. Above it is set a resplendent tabernacle of gilded bronze, and facing it on each side are the sumptuous monuments of Sixtus himself and of his sainted prede-

The second of the two chapels was built twenty-five years later for Paul V. by Flaminio Ponzio. It is even more splendid than the chapel of Sixtus which it copies, and more refined in its architectural detail. It, too, has its venerated relic, enshrined under a magnificent canopy over its altar—the sacred picture of the Virgin painted by St. Luke, the same which was carried in the solemn penitential procession to St. Peter's by Gregory the Great when pestilence was desolating Rome. When Paul had finished his chapel the picture was again carried in procession and was fixed here in its frame of amethyst, guarded by gilded angels under a canopy of lapis-lazuli and jasper.

^{*} Literally, richer columns of gray granite have been substituted for the pairs that were thus displaced.



S. M. MAGGIORE. -FAÇADE OF FERDINANDO FUGA.

their design, there is one difference last plunder of the basilica of Maxenwhich has, I think, a special signifi- tius or Constantine, and crowned it cance. The dome of Ponzio's chapel with the bronze statue of the Virgin is the ordinary hemispherical dome of which we still see there. But Fontana the Renaissance; Fontana's is lifted and Ponzio would hardly recognize the into an ellipsoid. Now Michelangelo's venerable basilica which they left to be dome designed for St. Peter's was a guarded by these two sentinels in the hemisphere, and we know that Della massive building which now stands Porta and Fontana got permission there, with two modern façades facing from Sixtus, who insisted that in every the long streets that lead away from it other respect Michelangelo's design a mile in each direction. The old should be carried out to the letter, to basilica is buried in a pile of buildings change the outline of the dome and occupied by the canons and other offimake it higher. The dome of Fon- cials that serve it, and from most tana's chapel is a pigmy compared points of view has much more the aswith that of St. Peter's; its outline is pect of an enormous palace than of a not so fine, but it is an embodiment of church. The rear front, facing down the same idea, an idea which no one the slope of the Esquiline Hill toward but Fontana seems to have had. St. the Trinità dei Monti, was built for Peter's dome was built in 1588-90, Clement X. (1670-76) by Carlo Raijust after this chapel; and it would naldi, and follows more or less the seem that here was embodied the first lines of a design left for it by Ponzio. conception of that soaring outline It is by far the finest part of the exterwhich, more than its size, makes the ior; standing well at the summit of the distinction of that dome above all other domes of the Renaissance.

Our history of the old church of Sta. time he opened the long street that domes. under the triple name of the Via Sistina, 60 feet high between its lofty pedes- palace is in five stories and the church

Closely as the two chapels agree in tal and its block of entablature, the slope, with its simple masses and long lines, and approached by an imposing flight of steps, it is dignified and harmonious. The rear of the basilica Maria Maggiore may end here. The forms the central mass, and the apse changes which since this have taken projects from the middle, showing in place in the interior, where alone the the intercolumniations the windows of old church can be seen, are of little Nicholas transformed by round arches. moment. The important changes are One great order of Corinthian pilasters in the exterior, or rather in the archi- covers more than half the height of the tectural case that has been built about whole front; the second stage is too the exterior. At the time that he built high in the middle for a windowless his chapel Fontana had, by order of attic, but in the wings suits the windows Sixtus, set up in the open place behind of the second-story apartments. The the apse of the church an obelisk which twin domes of the Sixtine and Pauline nad long lain neglected near the Mauso- chapels rising above the wings make an leum of Augustus. The task was in effective, though divided composition. some ways more difficult than the The warm-toned travertine of which handling of the obelisk before St. the whole outside is built, adds a charm Peter's, for this one was broken in to the architecture, and from a suffipieces and had to be cunningly mended cient distance the mediæval bell-tower before it could be slung. At the same helps to unite the otherwise disunited

The main entrance-front, built for Via Felice and Via dei Quattro Fon Benedict XIV. in the middle of the tane connects the basilica with the eighteenth century by Ferdinando Trinità dei Monti and the Spanish Fuga, is much inferior. It is in fact a Steps. In like manner Paul V., the many-windowed palace with a commonyear after he had finished his chapel, place and unrelated Italian church front set up before the front of the protruding from the middle. The corbasilica the great Corinthian column, nice is at a uniform level, but the

in two. There is some elegance of Christian Rome, and may serve the flimsy detail, the multiplied breaks tecture not essentially classic. dignity of the other façade, and the the Arch of Constantine. described.

into harmony with the nave, refreshed in Rome its readiest welcome and nathe baldacchino, with columns of por- classic aspect, its greatest sumptuousstands over the high altar. As he left these many centuries hardly strayed change in recent days has been the types. Even in the churchly rites of rebuilding of the confessio beneath the Rome and her popular beliefs, in the high altar by Vespignani for Pius IX., superstitions of her people, in the very who intended this for his own burial- days of her festivals, her cult of saints, place, but whose body lies elsewhere.

paganisme," says Letarouilly, in Rome at every turn. To all these things the at least, where Letarouilly wrote it, Liberian basilica, in its architectural this is true. St. Maria Maggiore is forms, in its pictured decorations, and an epitome of the architectural history in its magnificence, is a witness,

proportion in the two orders, Ionic and to illustrate how little there is or Corinthian, that cover these two stories, ever was in Rome of architecture discolonnaded below, arcaded above; but tinctively Christian, or of any archiin the entablatures and pediments, and earliest parts of the church that remain, the uneasy statues that crown the whether they are from the time of Libalustrade are in poor contrast to the berius or of Sixtus III., are as classic as The arch centre swears, as the French critics emancipated from the entablature, would say, at the wings. The vener- which is the only unclassic feature that able bell-tower lifts itself with a fine ever naturalized itself in Rome, has alertness above the cornice, but stands found no place here. The Lombard dépaysé among its surroundings. We style, scarcely known in this city, as we owe thanks to Fuga, that while he dis- have seen, except by its campanili, is placed the portico of Eugene III. represented in due proportion by the and used its columns for his own porch half-concealed bell-tower. The great he preserved the old front above it. Gothic movement, which changed the The open loggia which he provided in face of northern Europe, but has hardly the second story for the papal benedic- left any mark in Rome, is here but just tion at once protects and displays the betrayed by the windows of the apse historic mosaics of Rusuti which I have and tower. The art that lifted its head in Rome after the collapse of the ninth Benedict did much to restore and and tenth centuries turned instinctively adorn the interior. He renewed the to classic forms, as we have seen in the pavement, inserted the responding pil- vanished porch of Eugene III. The asters of marble which bring the aisles Renaissance, born in Florence, found the paintings and mosaic, and added tural home. It developed here its most phyry and canopy of gilt bronze, which ness. The decorative arts through all the church we see it still. The only away, it would appear, from classic the forms of her religious observances. "L'art a de la peine à se soustraire au the classical substratum shows through

W. P. P. Long fellow.



Glass mosaic, designed by Walter Crane. (See page 88.)

MODERN MOSAIC IN ENGLAND.



R. ANTONIO SALVIATI with whose name the revival of mosaic in England is usually associated has received an undue share of the credit

which is only partly his. In the year 1850 or thereabouts there was in Venice a certain Signor Radi, skilled in all the learning of the Venetian glass-workers. Dr. Salviati, an advocate practicing there, had the wit to see that the revival of the art of glass mosaic might be made a more profitable thing than the pursuit of the law, and he proceeded accordingly to advocate such a revival.

It was no difficult matter to win over to his way of thinking an amateur so keenly interested in art and archaeology as Sir Henry Layard, who not only advised and encouraged him in his efforts, but introduced him to the arch-

Scott, just at the time, as it happened, when he was about to undertake the conversion of Wolsey's Chapel Windsor into the "Albert Memorial Chapel" in honor of the then lately deceased Prince Consort. This was Dr. Salviati's opportunity, and he was the man to seize it and not let go. The decoration of the roof and of the west end of the chapel was entrusted to him. He also executed for Sir Gilbert Scott a mosaic picture of the Last Supper, for the altar of Westminster Abbey, and enriched with glass mosaic the spandrils of that other "folly" of her Majesty's, the Albert Memorial in Hyde Park.

Eventually what was practically an English company, backed by English capital, and administered by English directors (Sir A. H. Layard, Mr. Bates and the late Sir W. Drake among their restorer Mr. (afterwards Sir) Gilbert number) was formed for the purpose of



Elijah Denouncing Ahab. Mosaic design for Chester Cathedral by John R. Clayton & Bell, London).

developing Dr. Salviati's business. "Salviati's mosaic" is known all over the world. It is not so generally known that the said business is now carried on under the name of the Venice and Murano Glass Company. Dr. Salviati having ultimately severed his connection with it, and started a business in his own name, carried on since his death a year or two ago by his son.

All the credit that belongs to shrewd insight, business faculty, administrative ability, and persistent energy, belongs undoubtedly to Dr. Salviati. For the actual execution of the mosaic he was, of course, entirely dependent upon Radi and his subordinates. For the rest the repute of English Mosaic (good or bad) is due, neither to Dr. Salviati nor to Sir Gilbert Scott, but to the artists who designed it-and it is mainly of them that I shall have to speak. The most prominent of these is Mr. John R. Clayton. A sculptor by training, Mr. Clayton had drifted, associated with his friend Mr. Alfred Bell, into the manufacture of stained glass. At the time he was called upon to design the decorations of the Memorial Chapel, he had so little experience in mosaic that he consented only on the understanding that he should first proceed to Italy to study it. He is an old hand at it now. In addition to the works above mentioned he has designed important decorations in glass mosaic for Newmarket, Brompton and other churches, and in the way of marble mosaic, (of which I shall have more to say eventually) the decorations of Chester Cathedral and of the Guards' Memorial Chapel, attached to the Wellington Barracks, St. James Park. Two of the cartoons for the Chester work are here illustrated; they represent the Prophet Elijah, and the scene of the Denunciation of King Ahab.

It is disappointing to find that, master as he is of the subject, Mr. Clayton speaks after all without enthusiasm of his experience in mosaic. He is not so proud of his productions in that sort as one might think he has every right drances to him. One may not be al-



Figure of Elijah.—Marble mosaic, designed for Chester Cathedral by John R. Clayton (Clayton & Bell).

to be. In these latter days, when the ways able to avoid the pressure of cirartist is almost bound in self-defence cumstances which compel a man to put to be a man of business, artistic preju- perhaps mosaic pictures into stone dices are often in the nature of hin- frame work out of keeping with them or gold ground is to all intents and purcan under the circumstances; but he realizes that there is so much waste of

Mr. Clayton has too high an idea, or I should say rather too sure a reproduced by their permission. found it almost impossible to conform to the instruction of architectural jacksin-office, without descending to an archaism which he knew full well to be absurd. At the same time he has not the least belief in mosaic as a medium for the realism characteristic of the nineteenth century art. If however he has never satisfied his own severe judgment, he has designed much manly and masterly work in mosaic, with which there is not much in modern English decoration to compare. Mere "trade" work, I have heard it called by painters and others who do not half know their trade. Well, some taint of trade there is in it—decoration falls unfortunately into the hands of the tradesman. Are artists to stand aside and let him have it all his own way? This I know, that the trade of decoration in England would have stood to-day on a much lower level but for the work and influhas been a very nursery of designers.

The greatest artist associated with mosaic in England was Alfred Stevens. When it was proposed to fill the spandlow the dome of St. Paul's with Vene- execution of English design. tian glass mosaic, four of them were executed at the time, those of Isaiah of the Duke of Westminster's private

on to flat walls where the value of the and St. Matthew,—although Stevens left sketches for his four. The superiorposes lost. The artist does the best he ity of Steven's design needs no pointing out. The accompanying illustration is one of a series of photographic reproart—and the thought of it is not in- ductions just published by the London Autotype Company under the title of "Alfred Stevens and his work," and is knowledge, of what art is, to be vastly Watts himself seems to have acknowlsatisfied with anything he has done. edged his master when he designed And as far as concerns mosaic he has felt afterwards his second spandril (only rethat the conditions of English archi- cently placed in position) in which he tecture, English climate, English prej- has abandoned the altogether inapproudice, were against his expressing him- priate picturesqueness of his earlier self adequately in that medium. He manner, and adopted the larger and alfelt the want always of broad surfaces together grander style which Stevens of unbroken gold, such as are afforded himself owed to his masters, the great in Byzantine architecture, and of the Italians of the Renaissance. This fig-Southern sun to light it up; and he ure of St John has been enlarged from Mr. Watts' small sketch by Mr. Britten, who has also enlarged Stevens' figure of Daniel, recently put up, and the two remaining prophets which will probably be fixed by the time this notice is in print. Mr. Britten who is also to design the figures of S. S. Luke and Matthew, is an able designer of the younger generation, who has here a splendid opportunity of distinguishing himself. It is as yet too early to speak of the mosaics in the Choir of St. Paul's upon which Mr. Richmond will be engaged for the next three years, and which will be executed by Messrs. Powell & Sons.

A work of some importance has lately been executed by this firm for Clifton College Chapel, from a design by Mr. Holman Hunt, who shows in it no appreciation of the characteristic qualities of mosaic. He has apparently given up the problem of adjusting the rival claims of Decoration and Picture, ences of Mr. John Clayton, whose studio and produced just a painting, which has nothing to gain by being executed in mosaic. If it loses nothing, so much to the credit of the executants. At all events it is satisfactory to think that we rils under the "whispering gallery" be- are not dependent upon Venice for the

That it is possible to reconcile decalloted to Stevens, who was to design orative treatment with imaginative configures of the four great prophets to fill ception even in dealing with the scripthem. Mr. G. F. Watts was to design tures, is proved by the work of Mr. the corresponding figures of the Evan-Frederick Shields, who designed, for gelists. Only two of the figures were Mr. Alfred Waterhouse, the decorations



Isaiah -- Spandril from St. Paul's Cathedral, glass mosaic, designed by Alfred Stevens (published by permission of the Autotype Company, London).

chapel at Eaton Hall. These are executed in marble mosaic, a material which at the onset seemed to the artist himself more than unpromising as a material for color decoration. first when he saw the palette presented to him by the material, it depressed him terribly until it dawned upon him that by the adoption of either white or black for a back-ground he might perhaps find a way out of monotony. He made up his mind in favor of the black ground, and persuaded the architect, who was at first rather startled at the idea, to let him have his way. On this background (which is not of course a dead colorless black) his figures tell out light, but never too sharply—the material vouches for that. Mr. Shields secures variety between one panel and another by restricting himself in each to a selection only of the colors at his command, and he makes sure of unity by carrying certain indispensible tints throughout all of them. The effect of color is greatly helped by his adoption of the ancient system of putting in the cut-lines in each case in a stronger trait of the color they enclose (red for the flesh, gray for the white drapery, brown for the yellow and so on) so that it blends always with the tint and goes to make color; which the hard uniform dull brown or black outline of modern work certainly does not.

Like all good workmen, he does best to design only what can be well executed in the material he is designing for; but he gives credit to the workmen for having reproduced his design with surprising skill, and to Mr. Burke for having seconded him loyally throughout. The manufacturer seems, indeed, to have felt himself on his mettle, and to have determined to show what could be done in his material; so that the work at Eaton Hall chapel may be said to mark probably the summit of achievement, so far as concerns marble mosaic in this country. For all that, the artist found the restrictions of the material more than hard to bear-never again, he says, will he submit to that stern "mosaic" law.

A series of decorative figures resolves itself in the present day only too frequently into a row of stock dummies,



Jonah.—Marble mosaic, designed for Eaton Hall Chapel by Frederick Shields (published by permission of the Duke of Westminster).

any one of which might as well stand for the other. It is only by the scroll or emblem that ye shall know them. Mr. Shields has a wholesome contempt for such work. He believes in independence, and has the courage of his own individuality—he thinks of Nememiah as a man "with the hand of the Lord upon him," and represents him so-he conceives Moses standing on a globe diapered with the waves of the flood he makes Jonah emerging, with seaweed above his head, from the jaws, not of the whale, but of the "great fish" which the Lord prepared:—the Queen of Sheba rises from the dead and rebukes the slayers of Christ, and so on.-His is not what is called ecclesiastical art, but it is the art of a deeply religious The illustrations given are from his cartoons. It will be noticed that he does not indicate the tesseræ in his drawings.

There is no occasion to say much about ceramic mosaic. It has been adopted mainly for purposes of flooring (as in the case of my simply ornamental design on page 86), to which its hardness suits it at least as well as marble better, if we may trust the tile-makers; and if the design does not often rise above the common-place, we may conclude it was cheapness ruled it so. use of tesseræ of lustered ware is, however, a new departure on the part of Messrs. Maw & Co., who have succeeded in obtaining a very great range of tints in lustre, admirably adapted to the purposes of ornament. Mr. Henry Holiday has made use of their lustre in the reredos, so badly placed it seems at Philadelphia, that it must needs be lit up by electricity. As long ago as the year 1866, Mr. Holiday designed some mosaic for Messrs. Heaton Butler & Bayne, at St. Lawrence Jewry, London, for the execution of which he disclaims all responsibility. The Philadelphia reredos was executed under his own direction. He was careful not to grind down the tesseræ to fit without fault, but to let the interstices show. He insisted also very particularly upon working from the front of the picture in putting in the tesseræ, not from the back of it, which is the more mechanical device of our day. By this means of course, the



The Queen of Sheba.—Marble mosaic, designed for Eaton Hall Chapel by Frederick Shields (published by permission of the Duke of Westminster).

exceeding evenness of surface which takes from the effect of much modern glass mosaic is avoided.

There is no doubt that much of the charm of old work, such as that at Ravenna, depends upon the uneveness of the surface, each separate one of the "smalti" reflecting light at its own separate angle, and upon the net-work of gray cement, which in a manner veils the garishness of the glass. It may be doubted, however, whether this is quite compatible with the *pictorial* complete-



Portion of pavement, in ceramic mosaic, designed by Lewis F. Day (Maw & Co.)



Our Lord Enthroned in Majesty.—Lustre mosaic, designed by Henry Holiday (Maw & Co., Sackfield).

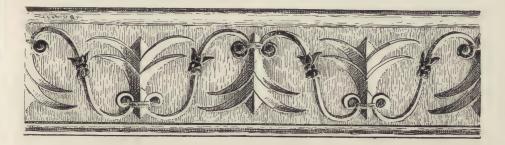
exhibited at the last Paris exhibition.

hardly does him justice. tograph has misrepresented always at home with four-legged crea- has a future before it.

ness at which the artist aims. It seems tures. Mr. Burne Jones' important perhaps hardly worth while to design a mosaics are, as every one knows, to be subject in the studious manner of Mr. found, not in England, but in the Amer-Holiday, each separate figure being ican Church at Rome. Mr. E. J. drawn carefully from the nude, only to Poynter designed, long ago, a figure of sacrifice all that precision of drawing, St. George for the Houses of parliament and to confuse the scholarliness of the at Westminster, but it scarcely shows composition, by the adoption of a him at his best, and is not any way, method more obviously compatible with a remarkable specimen of mosaic. archaic figure-design and barbaric There is much else, no doubt, that would ornament. The figure of our Lord in be well worth mention did space permit, Majesty given on page 87 is from a and more still, of which the less said mosaic executed by Messrs. Maw & Co., the better, such for example as the prefrom Mr. Holiday's design, which was tentious crudities which deface Mr. Butterfield's architecture at Keble Col-Mr. Walter Crane has not been called lege, Oxford. One is often lost in wonupon to design much in the way of der at the way in which out of anything mosaic; what he has done shows, how- so beautiful as the "smalti" or colever, his usual craftman-like apprecia- ored glass, results so absolutely hideous tion of the qualities of the material, to see are achieved. It is astonishing The reproduction of his cartoon the talent displayed by some in the way (page 79), one of a series of fig- of misusing a marvelously beautiful ures representing "The Elements," material. Still, though they be the ma-The pho- jority who misuse their opportunity, the enough of good, and even of very good, value of the colors, but the design is work remains to show that the art of otherwise not unworthy of him. He is mosaic is really alive among us, and

Lewis F. Day.





ARCHITECTURAL ABERRATIONS.*

No. 4.—THE PEDDIE MEMORIAL CHURCH, NEWARK.



turn as "mental weakness" and because having no angles and no feat-"moral perversity." We have no sort ures, it offers no points for architectnovel of Charles Reade's: "It is not adjoining a portico to the building. from want of brains he is mad." But this fails to answer the purpose, "that which differs from the customary monument, to which it is attached only structure or type." That settles it. mechanically and not architecturally. After that no man can deny that the If the angles of the square in which Peddie Memorial Church is an aber- the circle is inscribed were filled out ration.

torium church," and the designer of give the sense of stability and repose this edifice undertook to solve it by which is lacking to the circle, and the means of a circular church. That is a structure might become an architectural legitimate solution, doubtless, and composition with a harmonious balance might result in a very interesting edi- of masses and relation of parts. The

E have some hesita- from the customary structure or type. tion in setting down There used to be a circular church in the Peddie Memorial Madison avenue, which may or may not Church in Newark have answered its practical purposes. as an aberration, Architecturally it was a ghastly perwhich in these pages formance in corrugated iron, with no has perhaps come more ecclesiastical or other desirable to bear a somewhat character than a gas tank. A circular invidious and condemnatory sense, wall covered with a domical roof is the This acceptation is borne out by essential design of the Peddie Memorial, the dictionary, which, indeed, goes and comprises the auditorium. The so far as to define "aberration" in form thus attained is objectionable, of intention of imputing moral per- ural emphasis. The prototype of all versity to the designer of this edifice, circular domed buildings, the Pantheon nor even mental weakness. As was at Rome, suffers from this defect, which said by one character of another in a it was there attempted to remedy by There is, however, another definition and has been criticised with justice as a which comes timely to our rescue: monument built in front of another with subordinate masses, an architect-The problem was a modern "audi- ural form would result which would fice, though certainly in one differing entrances and staircases to the circular

^{*} We are making a collection of "Aberrations," and shall present one to our readers in each number of The ARCHITECTURAL RECORD.

auditorium would naturally take their large roll-mouldings that cross it and

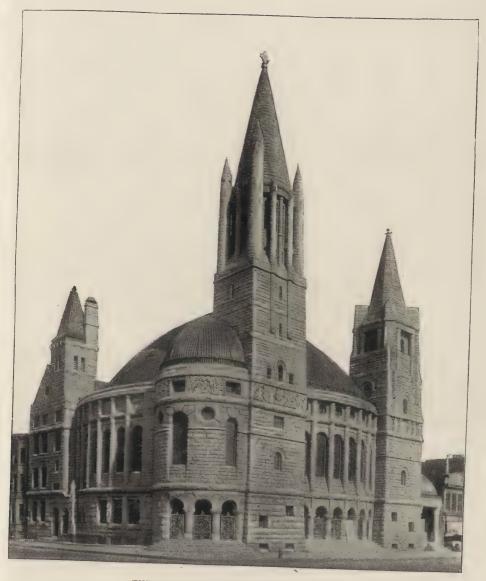
buildings.

The main defect of the Peddie Memothat the angular and rigid masses which are needed to assure the eye of the stability of the mass are, in the first place, set not at the outer angles of the including rectangle, but, with the excepend, are set so as to cut the circle in the plan; and in the next place, that generates the whole structure, and to leave the dome no longer a single or a crowning feature, but to cut it up into bits and belittle its importance. The builders of the mosques acted under a into the domed structure, would have injured its effect, which is enhanced by their isolation. It is to be gathered, indeed, that the designer's purpose was angles, that at the outer corner being the largest and strongest, as the most important in the principal perspective be made that for its purpose it is view. But this purpose cannot be said to have been artistically carried out, and the impression actually conveyed is of a domed circular building, obscured by incongruous towers, of which one, the little tower built up against a house gable, and pretty plainly without any function, except to correspond with the tower at the furthest corner, even betrays a defective sense of humor.

Very much more, of course, is to be pardoned to an architect who is working out something "differing from the customary structure or type," than to one working upon the lines of an accepted type, but the intrusion into a circular church of the double towers that properly flank a gabled front seems clearly a solecism. The general treatment of the circular building itself and of its outlying features, seems to us very happy. The happiest point in it is the division of the wall into three all the openings of what seems to be a parts vertically, a basement, a principal belfry. The church, with its aberration story and a low attic, by means of the "from the customary structure or type,"

place in these outlying and subordinate that traverse also the towers and the subordinate building, so as to ally them as much as possible with the main rial Church in general composition is building. The round wall that emerges at the front between the two towers is in itself a very satisfactory piece of design. Its three members are happily proportioned; the bull's-eyes of the attic give a meaning and force to the tion of the subordinate building at one crossed mouldings that frame them and the upright rolls justify themselves by the depth they add to the openings and they are developed into towers and by the vigorous batter at the bottom of crowned with spires. The effect of this these, by which they are receded from disposition is to confuse the motive that the plane of the lower wall. In the side the treatment is less successful, the trellis of mouldings in the attic looks capricious, being no longer explained by the openings, and below the sufficient lintels of the openings of the much truer feeling in detaching the basement are other lintels merely slender minarets that if incorporated inserted in the openings and without visible means of support. But one thing must be said in high praise of the whole exterior, and that is that the architect was evidently building a structo "'stablish" and fortify his building ture of masonry, and not merely making by strong and stark masses at the a drawing to be afterwards translated into masonry.

> Of the detail a general criticism may unnecessarily rude in character and that its rudeness is by no means wholly justified by the untractable granite in which it is wrought. This rudeness is partly in the design, as for instance in the omission of the abacus over the capitals of the columns throughout, an omission which involves the projection of the capitals themselves beyond the piers they carry, and in the aborted capitals at the imposts of the arcade. It is even more a matter of scale, which is exaggerated in the detail throughout, and becomes positively gross in some features, especially in the frieze which takes the place of the attic in the belting of the towers. The towers themselves, incongruous and confusing as they seem, are designed with a vigor that does not escape rudeness, and with a massiveness that is evidently misplaced when it walls up almost solidly



THE PEDDIE MEMORIAL CHURCH, NEWARK.

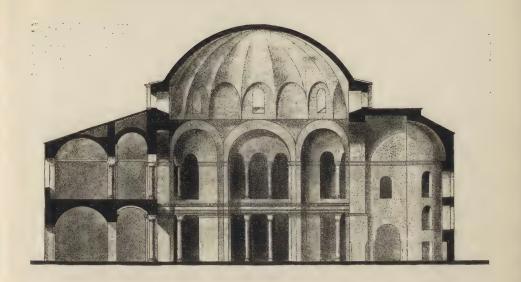
success.

not appear here what the construction ously pervasive.

and with the incongruities and short- is. There are arches at the sides that comings that prevent it from es- may represent trusses of metal, and tablishing a type of its own, is never- perhaps the curious soffits of paper theless an interesting and suggestive framed in wood are meant to suggest performance, and a second attempt such trusses. But the apparent arches by its author in the same direction are long voussoirs of pine boards, the would doubtless attain a still higher roof is sheathed into invisibility, and the feature of the interior is an enor-The interior is by no means so suc- mous piece of wooden tracing that has cessful as the exterior. It is very full, no structural significance whatever. The almost too full of cleverness, for the detail by no means represents the same architect apparently did not realize in knowledge and skill in carpentry that designing it that an architect's smart- the exterior does in masonry, or the ness is given to him to be trained and same idiomatic treatment of material. brought into subjection. It would be The best of the detail is in stonework impossible to carry a circular roof over or in metal, but of this there is little; so large a space without a construction and the absence of a sense of humor, that would be capable of an interesting which upon the outside is noticeable architectural development, but it does only at one or two points, is here injuri-



There are beauties that die with the dawn, As glorious quite As those of the light That come in with the Dawn; Silence has charms that are broken By the sweetest word spoken; All things are born at a cost; They come, and lo! something is lost.



BYZANTINE ARCHITECTURE.

Part II .-- NEO-BYZANTINE.



Constantinople had was naturally taken as a model for other large churches

cathedrals. All the principal mosques —with modifications, of course. Sta. Sophia at Salonica is a striking cathedral inside. It looks vast as comthere, with the exception of St. George, and this scarcely has the look of a Christian church; but when I saw it I had not seen the original, nor the great Turkish mosques. The idea is a fine one, if not carried out on too small a scale. This church is now merely whitewashed, so there is nothing but the conception to captivate you—there is nothing to be set down to the impression produced by gorgeous decoration and inside a narthex, rather over 18 in the narthex and aisles on which the

HEN Sta. Sophia at feet wide and 104 feet long. The aisles are about 18 feet wide and 86 feet long, once been built, it and must, I suppose, have been separated from the narthex by curtains. The length of the nave from the narthex to the end of the apse is 105 feet, and its width is only 33 feet; but at Constantinople built by the Turks it has two square recesses at the sides are from the model of Sta. Sophia of the dome, making it there 56 feet, while the nave at Sta. Sophia, at Constantinople, is 265 feet long by 110 feet wide. You see, by comparing pared with most of the other churches the plans, that it is without the two grand hemicycles, that the bema is much deeper, that the screen walls are carried back instead of being in line with the face of the dome piers, and you also see the two chapels or vestries on either side of the bema have an apse to each. Above, the gallery goes over the narthex as well as the aisles, as at the great Sta. Sophia. At one time this cathedral was sumptuous with marble linings and mosaic, but the marble linso you may bear in mind that a grand ings have disappeared, and the mosaic idea, properly carried out, produces a is now obscured by whitewash and by grand effect. Externally it has a Turk- the smoke from the fire. The fire has ish porch extending across its front, also revealed an undercoat of plastering

remnants of frescoed figures and orna- built by Justinian. The Rev. Canon ment are to be seen. The cathedral Curtis says it was built before Constanexternally has a more architectural tine's time, i. e., over the bodies of St. appearance than the great Sta. Sophia. The Turkish portico, consisting of an suffered under Decius in 250; and Ferarcade of nine columns, has doubtless been a great improvement to its appearance; above this is a narrow strip of wall, the front of the gallery over the narthex, with twelve small round-headed windows in it, two of which are blanks. These small windows give a scale to the building, and make it look larger than it is; above them is a still narrower strip of wall, with one window in the middle. The drum of the dome is square, and is pierced by three large round-headed windows, which give light drum. Above this is a strip of the cirthis to the square wall below are flying buttresses; above there is the segmental cap of the dome, covered with lead. The Turks have improved the appearance of the dome by the addition of a little dome-shaped piece, from the centre of which springs a finial.

In small churches there was an inclimay be seen at St. Bardias, at Salonica. wife and family. It has the three apses, in this church, and the Hodegetria. and an octagonal drum to the central dome, with windows in it of two tiers; but in this case the dome is not seen has a hipped roof, it has two later domes over the gallery above the narthex. St. Elias, at Salonica, has a peculiar plan; it is trefoil with a straight end,—the three foils form the bema but has two tiny chapels with apses, in the huge piers of the bema, and a large narthex and gallery over. The narthex is vaulted on four columns. It is about 25 ft. by 31 ft. inside. From the appearance of the church I should judge it to be late.

I will just mention the Church of the Monastery in the Country at Constan-Ducange says the original church was an apse to each, generally projecting

Babylus and two other martyrs, who gusson believes that its front gave the idea of the front of St. Mark's at Venice; though, for the matter of that, many Byzantine churches have similar features,— one side of St. Bardias, for

example.

The present church was either rebuilt or restored in the reign of Andronicus Palæolagus the elder (1283-1295). It now consists of the central church with another adjoining it on the north side, and a two-story building on the south, and is celebrated for the beauty of its to the windows of the internal circular decoration. The narthex and exonarthex have the remains of some of the cular dome, covered with lead, and from most beautiful mosaics that remain to us. The north church has been adorned with figure painting in fresco; the central church has its walls encrusted with lovely marbles, pietra dura, and geometrical mosaic in gold and colors. It is adorned with some of the most beautiful acanthus work carved in white marble I have ever seen; in it was kept nation to make the central dome stand the portrait of the Virgin, attributed to on four monolithic marble columns, as St. Luke. I believe the marble doors once covered this portrait. A robe of It is called so in Texier and Pullan, but the Virgin, which was carried in proceswas dedicated to the Virgin in the year sion round the walls of the city when 1028 by Christopher Bardias and his it was threatened, was alternately kept

From Justinian's day there seems to have been a strongly-marked inclination to arrange churches on the folexternally, the drum or central tower lowing plan: -A square was set out as big as you could afford to build your central dome, with columns or piers at the angles; from the centre of this square half circles were turned, and the extremities of these formed the external and the two transepts; it is without aisles, lines of the aisles and of the east and west arms of the cross; to the east there was a deep space beyond, with the apse at the end forming the bema; the four squares formed by the aisles, and the two similar passages crossing east and west, round the square of the central dome, were ceiled with small domes level with the other vaulting. The aisles were carried as far as the tinople $(Mov\eta \tau \tilde{\eta} \in X\omega \rho \alpha \tilde{s})$, because square part of the bema, and then had subsidiary little domes were carried up on drums to group with the central dome, and the narthex also sprouted into domes. This plan seemed to take the fancy of the Westerns as well, for I found that St. Mary-in-the-Fields, at Piacenza, built in Renaissance days, was a complete example of this method, only the central dome was veiled externally by square erections; the four little domes had drums, and showed externally.

church than the spaces I have described, another bay was added at the west, or were put outside the first aisles. The arrangement before mentioned, occasionally with slight modifications, may be seen at St. Theodore, the Pantonople, and at St. Bardias, at Thessalonica; Sta. Sophia, at Trebizond, is an dral St. Theodore, and the Kapnikarea, at Athens.

Athens, at the church of the Monastery of Procopius' description of the Sti. bema to the front and back walls. Apostoli at Constantinople, only St. Nicephorus. the dome itself as at Sta. Sophia.

externally. A narthex was added at struction of the two is absolutely differthe west end, or a narthex and exo- ent: that of St. Mark's is pure Byzannarthex. As the time went on, these tine, brick veneered with marble, or covered with mosaic; St. Front is of worked stone,—walls, pendentives, cupolas, and all. It is extremely unlikely that if Byzantines built St. Mark's that they were also masters of stonecutting, and they must have been to execute St. Front, unless we suppose they merely gave the plans and sections, and left the French architect or master-mason to construct it in his own fashion, for the stone-work does not look like Byzantine work. When more room was wanted in the have been bitter controversies on the question of who designed and who carried out St. Front, and as I have no two additional aisles, or four chapels fresh materials to bring that might settle the controversy, I will leave it as it is; I may, however, say that there are a few small windows in the domes of St. Front. De Verneilh has pubcrator, the Theotocos at Constanti- lished a book and a pamphlet on this subject.

The old cathedral at Athens is curiimperfect specimen; at the old Cathe- ous for many reasons; it is a very small church, only 24 ft. 2 in. wide over all, and 37 ft. 6 in. long. exclusive of In the case of St. Nicodemus at the central apse, which projects about 3 ft. more; it has a narthex about 6 ft. at Daphne, near the Bay of Eleusis, and 8 in. wide, whose length is the whole at St. Nicholas at Mistra in the Morea, width of the church. The church has the central domes come up to the bema, three apses, and a central dome on a the arms of the cross are made much drum, and the internal cross is made narrower than the diameter of the by the four barrel vaults surrounding dome, and there are additional aisles or the dome. The nave is only 8 ft. 2 in. chapels on both sides; the two first of wide, and the bema and parabemata these churches have squinches or conchs are cut off from the nave by the iconinstead of pendentives. St. Mark's at ostasis. Outside, the cross is brought Venice is somewhat after the fashion forward over the narthex, and over the

The cathedral shows on its face some Mark's is said to have been built attempts at elegance; it was evidently in 1043, in the reign of Constantine the built during or after some occupation Tenth (Monomachus, Finlay calls him, of Athens by barbarians, for it has the Ninth), and covered in 1071, in the barbaric carvings on it, and it has also a reign of Romanus, Michael the Seventh, family resemblance to the churches in The domes at St. Armenia. It now stands in an open Mark's are pierced with windows in square, with its main front towards the street. It is built of large stones, with The plan of St. Front at Perigueux a brick course between each one of is very like that of St. Mark's-so like, stone; its front has a dentil cornice that if one were not a copy of the with a carved frieze, which looks like a other, they were taken from a common bas-relief, on which crosses have been model,-possibly the Sti. Apostoli at worked or let into, and with a necking; Constantinople. However, the con- at each end of the cornice is a Classic

pilaster cap. In the centre and imme- cross with a two-light window in it. diately under the frieze is a moulded From the middle of the church an ocmarble arch forming a discharging tagon drum rises from a square base arch over the lintel of the door; a with long circular-headed windows, moulding runs up vertically from the whose semi-circular archivolts cut into bottom of the ends of the archivolt, the dome: the dome is tiled, and has a forming plain marble spandrels, and cross for a finial. The carved marble the arch itself is filled in with a carved slabs inserted in the external walls are slab with a cross in the centre; the top of all ages, and the carving ranges of the lintel is moulded, and this from pure Classic to pure Barbaric, and moulding runs across the front of the they are placed according to their church; the lintel below is carved with form, but quite irrespective of the ornapateræ, and two lions facing a cross in ment on them. Some are upside down, the middle; the door below has two plain and some horizontal bas-reliefs are put marble jambs, which go down to the vertical. One panel of barbaric carvstep, and there are no windows in the ing represents a hare in the claws of front below the cornice; between the necking of the frieze and the moulding sibly a cheetah or a lion, seizing a on the lintel are three carved slabs on fawn. It is an episode likely to strike each side of the doorhead, roughly a pastoral or hunting people. It is symmetrical; in the centre above the repeatedly used as a simile in the cornice is the gable end of the upper "Arabian Nights," though the lamb roof, forming one arm of the internal often takes the place of the fawn, and cross; this gable has a two-light win- this or a cognate subject is of remote dow in the centre, and the rest is filled antiquity. In the Odyssey we read up with carved panels; the north flank that: - "Goodly Odysseus wore a thick has a doorway in the middle, slightly purple mantle, two-fold, which had a projecting, and a window between it brooch fashioned in gold, with a double and the west end. The cornice runs covering for the pins, and on the face through, and is stopped by the door- of it was a curious device: a hound in way, and over the doorway is another his fore-paws held a dappled fawn, and tween the west end and the gable end swords or daggers, just below the hilt. of the external cross by the flank wall Whenever we see the hideous oc-of the lean-to roof, and carved panels tagonal drums with their window arfrom the middle of which rises a verti- them to a late date. cal and central straight piece, also other small arched windows, being

an eagle. Another a wild beast, posarm of the cross that gables, and this gazed on it as it writhed." (Lib. 19, end of the cross above the roof has Butcher and Lang.) This device is also a double window in the middle. still used in the East; you may often A sort of half pediment is made be- see it carved on the blades of Indian

are let into this side wall. The back chivolts cutting into the external dome, or east end is finished with a pediment, I think we shall be right in attributing

It is not easy to see how the external gabled; against this the roof of the walls of churches are built at Constansemi-octagon of the bema abuts; below, tinople, as they have been so repeatin the end of the semi-octagon, is a edly whitewashed, but I believe the two-light window, and there are two plan was the same as that pursued at Athens; each course of the stone-work those of the other two apses, which in had one or more courses of brick-work this case do not project. The upper between it and the next, and the Bypart of the east end is covered with zantines mostly used thick mortar carved slabs. The south flank has a joints, as thick or thicker than the line of carved slabs and one window, a brick, but in addition to the horizontal doorway with an arch over, and the courses the bricks were used in the lower part was once painted in fresco; same manner in the vertical joints, and at the west end of this side there is the in some cases the stones appear to have half-pediment, like the one on the been kept short, and the spaces benorth side, and the fourth arm of the tween these ends are filled with mortar,

nary strings when not of marble are made by setting the bricks diagonally between two courses, flush with the wall, the points of the dog-tooth come out flush with the horizontal courses. For eaves the diagonal bricks project. bricks laid zigzag, horizontally, and by been mistaken in confounding have single, double, and triple lights. of two rings, the mortar joints being the Erectheum, and the Theseum. archivolts, with zigzag bricks in them, and two-light windows often have a two arches. The mullion is usually a marble slab, about 3 in. to 4 in. thick, in section, or a half octagon or hexagon. The top is finished with a cap, sometimes with a rosette under it, and sometimes with a rosette only. These little attached columns sometimes have splayed bases and sometimes none. The arch, which is usually stilted, is carried on a cube of marble supported on the mullion; this cap is slightly splayed on the two sides, and deeply are sometimes plain, but more often carved. Sometimes the ends only project a trifle before the arch, and sometimes to the whole extent of the end splay, suggesting that a regular length was kept in stock. At the Church of the Monastery in the Country at Constantinople the mullions are of slate or of dark gray marble, and only look about 2 in. thick, have square ends, and are ornamented with sunk lines at top and bottom, and with the usual cap on Roofs are mostly covered the top. with tiles, the water tiles being segmental in sections, and the covers halfround. At the eaves two dabs of mortar are put in the spaces between the segmental tiles and the roof, and another dab into the hollow of the half-

and with the bricks in the vertical round one, forming a line of rude antijoints cut in imitation of Cufic charac- fixæ. These devices might be adopted ters: at St. Nicodemus at Athens there for cheap brick cottages or churches in is a plastered string, ornamented with the country; it is a sort of bricklayers' this work, each bit of Cufic writing be- art. At Athens the churches are mostly ing separated by a star in brick; ordi-minute in size; at some of them I could almost touch the sides of the nave with my outstretched arms. But at present we only see churches that are on a small scale, the great Byzantine churches of Athens were Sta. Sophia, afterwards the Church of the Virgin, At the Sti. Apostoli, at Salonica, there St. Nicholas, and St. George. I may are patterns formed on the walls with here say that Gibbon appears to have vertical interlacing zigzags. Windows patron saint with the fraudulent pork butcher of Cappadocia; these churches In each case, the arch generally consists are better known as the Parthenon, thicker than the bricks. These arches the marble walls of the Parthenon the are capped by circular or segmental remains of pictures of Byzantine saints and ornament still remain, and in the Theseum the Byzantine vaults of St. brick star in the spandrel between the Nicholas still exist. The little Greek churches are curious from an archæological point of view, and are as supewith both ends forming a quirked bead rior in practical science to ancient Greek construction, as they are inferior to it in every æsthetic quality. Besides the stately ruins of the Acropolis, where exquisite architectural simplicity has been carried to the highest point man has yet attained, where no touch of the chisel has been given except to an artistic end, and not one in vain, where the greatest sculptors have adorned the building with the most perfect specisplayed at the ends. The end splays mens of the human form, and with masterpieces of composition, we scarcely bestow a glance upon one of the little Byzantine churches beside them. Still they have their use in illustrating the history of architecture and of humanity. What we should look for, and what we shall certainly find in them, is the science with which domes are poised and the ingenuity displayed in new arrangements of plan without diverging in the main from the established type. Almost all Byzantine churches are domed; for internal effect you want the dome to rise immediately from its pendentives or squinches, so that it may form part of the general effect, when it is on a high drum you see nothing but a light space until you get under it, and then your attention is confined to the drum

and dome. It is like an episode in writing, it may have what merits you please, but it interferes with the continuity of the main subject. The use of drums may, however, be looked on as a benevolent invention, when the drums and domes are not too ugly, for many more see the outside than the inside of a

building.

I think that anything in architecture which merely causes surprise, reduces the architecture that employs it to a secondary level, still in that level it may be considered praiseworthy. The small internal domes, on pierced drums, have a startling effect; you look down a long aisle or narthex without windows, and see patches of bright light, and when you arrive at one of these patches and look up, you seem as if you were looking up from the bottom of a fluted well, for most of them are fluted and pierced with sufficient windows to make them seem all light in a sunny

Thanks to Mr. Falkener, we have the drawings of St. Clement's at Ancyra, in Galatia, given in Fergusson's "History of Architecture;" in one respect it resembles St. Theodore, at Constantinople; the apses of the aisles are continued round so as to make circular halls; it has also a short drum to the central dome, with four windows, but the bottom of the dome itself is pierced with many windows, as at the great Sta. Sophia. Were it not that St. Mark's at Venice, built in the eleventh century, has the same features, we should assign St. Clement's to an early date. We want illustrations of many more churches from Asia Minor, and more dates, before we can venture to assign the period of construction from peculiar features. I will just mention the churches in Armenia, because they have a strong resemblance to those in Athens, though rather superior to them in style, with domes of Persian shape.

The church at Dighour, in the neighborhood of Ani, has a plan of the regular orthodox type, a central dome on four large square piers, forming a Greek cross by means of four barrel vaults on the four sides of the dome, with an apsidal bema to the east, very narrow

of the aisles are two oblong chambers, and from there being two small apses north and south at the east end beyond the walls, and in the open air, it has the appearance of having had a lean-to roof, or a small colonnade outside; at Usurlar these outer colonnades or arcades still exist, but the east ends of the aisles and outer arcades are square, though the bema is apsidal. Externally, the church has a strong resemblance to some of the buildings in Central Syria; the lateral sides of the cross are shown by projection above the roof gabling as at Athens, and though the east and west arms are merely indicated by a slight vertical break in the main gable, this upper part is gabled too. One of the most curious features in the church at Dighour, is the occurrence of six buttresses with off-sets and water-tables at the west end.

In a course of lectures it is impossible to give examples from every country where Byzantine Architecture prevailed, but I may say that the ancient coptic churches of Egypt are very curious; they all appear to have a central apse, a few only have the three, and half the dome is over the bema, i. e., the walls of the apse form the spring for it; these coptic churches are curiously divided by screens, and what looks like a narthex

has a tank in the middle.

Mr. W. Boutcher, who was engaged on the Assyrian discoveries, has been amiable enough to entrust me with his sketches of the church of Mar-Yakoob (Bishop James), at Nisibis, made in the year 1855. I believe no plan or description of this church has ever been published. The town of Nisibis is situated on the plain at the foot of one of the spurs of the Mount Masius, and was the key to the Valley of Mygdonia, from which Mesopotamia was mostly entered by the Persians; it had successfully resisted two attacks of Sapor II., the Persian King, and on the third attack Bishop James urged on his townsmen the necessity of resistance. Sapor had to raise the siege on account of an incursion of the Massagetæ. Nisibis was ultimately conceded to Sapor by Emperor Jovian, in the disastrous treaty made immediately after the death of aisles, and no narthex; at the east end Julian in his Persian campaign.

was triple, the domed one with the nar- a mausoleum to the Bishop. up close to the apse, and suggesting shore. under the church, and was supposed to cating with it.

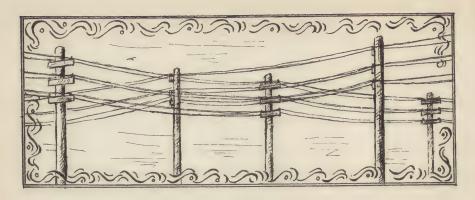
The church was in 1855 a double one, be that of the Bishop. By some the but there was a tradition that it once centre church is believed to have been

thex being the middle one; each of the Mr. A. Graham has been kind enough two remaining churches has an apse at to lend me one of his drawings of the the east end, the shorter one has a flat Basilica at Theveste (Tebessa), the last apse at the west end as well, with a Roman town in North Africa, being semi-circular niche in it. In the larger about 100 miles west of Thapsus, and church there remained one aisle going at the same distance from the north The old Roman Basilica that there had been another aisle; but lay north and south. The Basilica there was also a tradition that this was was surrounded by cells for monks. a subsequent addition to support the A bema was got to the east by vault; this church was vaulted with a a descent of thirteen steps from the pointed vault. The recesses at the outer wall of the Roman Basilica, and ends of the aisles, in a line with the has apses north, south, and east, much springing of the apse, are square. An like St. Elias at Salonica. To the empty sarcophagus with a cross on it north and south of the east apse are was found in a vault 14 ft. by 8 ft. two quadrangular chambers communi-

Professor Aitchison.

(TO BE CONTINUED.)





CROSS-CURRENTS.

N artist named Walter Crane has lately been creature of his time; he can express only the at some expense of words to prove that the "restless and discordant aspects of much of modern life, the result of certain economic conditions, are unfavorable to the development of a fine artistic sense—and that these economic conditions discourage artistic sincerity and tend to reduce artistic production to the level of all other marketable products-produced for profit rather than for use or enjoyment." Thus, according to Mr. Crane the finer part of the artist's nature is suffocated by the mercenary sordid atmosphere wherewith he is surrounded. He needs an environment freer, larger, more stimulating and less offensive, and as socialism proposes to waft into existence such an environment, socialism should "appeal" to artists. Now, that this is a very convincing attack on modern life, we do not for a moment believe. portion of truth Mr. Crane's crude and overdrawn sketch of our surroundings contains may be recognized without leading to the astonishing conclusion that he so confidently adduces; and as a matter of fact Mr. Crane's sketch does contain only a small portion of the truth. It may be that the "artistic sense" is as much afflicted by modern life as Mr. Crane would have us believe; but this does not make very much difference to one who does not accept the "artistic sense" as a criterion of things as they really are. In order to obtain such an agency of illumination, we prefer to leaven Mr. Crane's "artistic sense" with a little brain stuff; and so having obtained an implement of vision, we can try to see things not in part but in whole.

When we examine Mr. Crane's articles through these spectacles of truth, we are at once struck by some peculiarities in the relation between Mr. Crane and his subject matter-Mr. Crane being, of course, an embodiment of "artistic sense."

ideals of his own age. Even when he pretends to like his age least, he is most assuredly under its domination, for its spirit builds the very temple of his isolation and then moves aside to laugh at his impotence—for impotent both as artist and thinker the alienist is, There are periods in which rebellion is necessary, but rebellion must be prompted by outraged morality. It is when the law of God is violated that Isaiah begins to denounce. Denunciation that proceeds from an offended "sense" is always measurably querulous and futile, and nothing shows more clearly the futility of Mr. Crane's point of view that the conclusion to which he comes. socialism which, as he promises us, is going to remove all the restless and discordant elements in modern life and prove so highly beneficial to the development of the artistic sense, is simply one of those evasive fictions which an imaginative sentimentalism in its craving for a state of ideal satisfaction projects into an indefinite future time. How the human race is to reach the ideal conditions with nothing but its present depravity to start with is a question that is never answered. But it is not by supplementing Mr. Crane's defects of vision that we would redeem modern life. We would rather accept in a measure that part of the present which alone he is able to see and show as far as we can, that it is not so destitute of alliance with the larger things in life as he would have us believe. We have, then, no intention of denying that the industrial element is important in modern society as it has been important in no previous society; we do not deny that this industrial element is responsible for much in our surroundings that is ugly, repellent and degrading; we do not deny that in its excess industrialism is dangerous in tendency, and corrupt in spirit—a vile and filthy thing. But for all that, we affirm confidently that An artist is necessarily and fundamentally the the industrial development of the present time and is alive with spiritual significance—just be- the beginning to take a highly-cultivated form. cause this development, by its increasing mastery of external things tends to free mankind from the dominion of circumstances and to leave him free to expand as his own best nature counsels.

Both the critics and apologists of prevailing conditions too often mistakenly assume that money-making is nothing but money-seeking. The statistical economist, for instance, dwells lovingly on the amount of horse-power used in our industries at the present time, on the millions of yards of cloth and the millions of tons of iron that we manufacture, and in the thousands of miles of railway that we operate. His brother, the social economist likes to point out the immense advantages which mankind have gained from the telegraph, telephone and other typical modern inventions. They use these facts and figures to prove that the contemporary man and woman are considerably happier than any of their predecessors. This, of course, rules the moralist and the artist. As the trustees of the spiritual welfare of mankind they indignantly deny that the said telephones and tons of iron in any way indicate that we are becoming more human than we were. But both our economist and moralist generally fail to discover the true significance of the swelling statistics. The important fact is, not that these figures are the "biggest on record," the important fact is that the people have enormously increased desires to gratify. The large production of commodities has for its correlation an equally large consumption. Millions upon millions of people are buying these products, and buying them because they want them, Less than ever before are they resting satisfied with what they have got. They want a greater variety of things than they ever wanted before, and they want this greater variety in greater quantity. Now this is a fact of portentous human significance; and this significance lies not so much in the circumstance that these demands are satisfied, as that they exist and increase, and that in order to satisfy them men are working with greater energy, and keener intelligence.

Thus far this enlargement of the average human personality has manifested itself principally in material and often in grossly material ways, but we still insist in spite of this fact, that this economic development results from and assists an enlargement of human character, and not, as Walter Crane and many others would have us believe, a contraction thereof. When the ordinary sluggish brutish man is aroused from his animal

is fraught with splendid moral and artistic promise, slumber, the awakening can hardly be expected in If hitherto his desires have been limited to food, clothes and beer, an arousing of his nature does not mean that he will immediately seek high art, Richard Wagner, and a university education. It means chiefly that he will want more and better food, more and better clothes, more and better beer, and that to these desires he will add others of much the same kind. Progress does not go by jumps. Master Workman is just as far as ever from being an embodiment of sweetness and light; and those writers who claim that this access of desire has anything but a momentary value are doing the people an injustice and injury. present stage is worthy because of what it leads to. If the process were already ended, it might as well never have begun; but it is not already ended. The increase of individuality is always manifesting itself in new and varied ways. It has resulted not merely in an increase of desire for more bread and beer; but in a firm determination on the part of the working-men to readjust their human relations to the larger value which they put upon themselves. In the beginning of the industrial development, they would permit their employers to work them for such a pitiful sum that wife and children had to slave so that the family might live; but the very struggle that this brought about in the end increased their sense of their own importance. They began to fight for more wages and shorter hours of labor-which was tantamount to an affirmation that they were human beings and not machines. Then commenced the warfare between employers and employés-a struggle in which both of the contending parties have been fighting the other's battles as well as their own. The employe's increased aggressiveness is but another side to his increased power of consumption, while on the other hand the employer's purpose to produce as cheaply as possible, which necessitated a resistance of the demands of his employés is the very circumstance which has made the increased power of consumption possible. The struggle is still going on; and society, instead of being the loser thereby, as some writers tell us, is in truth the inevitable gainer. Both parties are yearly showing an increased moderation, and an increased power of organization; and there are spots in which the conflict has resolved itself into co-operation. Whatever the outcome, however, there can be no doubt as to the meaning of the conflict. It means that the average man, freed from the external impediments of the past, is getting into motion.

Now let us see, what can be said for another

element in the prevailing economic developmentthe element of machinery. Machinery, by which we mean all the implements and expedients used by an industrial society, comes in for a good share of the abuse which is lavished by heated moralists and the apostles of culture on an industrial society. This machinery is represented as being something distinctly antithetic to culture; and it is asserted that unless culture braces up and despoils machinery of some of its dominating power, the modern world will drift towards anarchy. People making such an assertion misconceive, we believe, the relation subsisting between culture and machinery. It should be remembered that machinery is but another word for external facts, and that it is only through such external facts that culture can realize its own ideals; consequently while culture may be obliged temporarily to place itself in opposition to machinery, in the long run it is obliged to make use of machinery for its own purposes. Furthermore, the fact that culture can make use of machinery for its own purposes, might lead one to suspect-in face of some elaborate mechanical process-that, worthless as that process appeared in itself, it might, through the course of many years, be making for the very thing to which it is superficially opposed. For, in the most general terms, what does machinery tend to do for our times? Is not its tendency simply to increase the efficiency of human labor, and in the end will not the result of the development of machinery in human life be to raise human labor to its highest power? It is important to remember that in relation to an industrial society machinery represents the active element in man. So that the greater the mass of machinery which a society can show, the greater its activities. The stupendous amount of horsepower which the world is using in its industries has not only a human significance derived from the fact that somebody is consuming all that this horse-power produces, but it has the further significance of tending to make human labor unnecessary by multiplying its product. In the end, if we can only get enough of the right kind of machines, the expenditure of human energy necessary to the gratification of man's material wants may be reduced to a few hours a day-possibly.

But, it may be asked, is there not a contradiction here? You have been saying that the significance of the modern industrial development lies in two directions. On the one hand the ordinary men and women are undergoing an increase of nature, through an increase of desires and of the ability to gratify them; on the other hand the en-

larged use of machinery is rendering human labor progressively less occupied by increasing its efficiency. If this is true, will not the wants to be gratified increase in about the same proportion as the means which are being taken to gratify them; and in that case, how can any economy of labor eventually result? The answer is not far to seek. The desires to be gratified do not increase in the same proportion as the means which are being taken to gratify them. The reader will remember that these increased demands upon life were pointed out as only the first step towards a higher state of being; but these desires cannot go on increasing indefinitely. An element of warfare and exclusion is almost immediately developed. It is found that the desires conflict; and that some of them consequently have to be subordinated to others. That is, if Master Workman wants to support his family comfortably, he must not drink too much beer and smoke too much tobacco. In the same way he finds at the very outset that, in order to fulfill these new demands which have arisen within him, he must learn and work; and the learning and energy also immediately tend to restrict his desires. It has been found, for instance, that one of the most effective agencies making for temperance is the refusal of the employers to hire men who are known to drink too heavily; and the workmen find this out for themselves-apart from any dictation by their employers. They gradually learn to discriminate between those desires, the gratification of which stimulates them in their work, and these desires the gratification of which interferes with their work. Thus from the necessities of his situation they are obliged to practice self-denial; and so they become sounder and healthier human beings, with increased foundation for enlargement and increased power of resistance. Thus does a still higher type of humanity tend to emerge from the conflict-a conflict which is practically the old one between the passive and active sides of our natures. Progress sets in when the two sides develop harmoniously, and when the enlargement is conditioned on the facts of Man's nature and his circumstances.

Thus we see how the moral element may be introduced into a society which in the beginning is by assumption purely industrial. Did it not become increasingly moral, industrialism would be suicidal, yet it would perhaps be very difficult at the present time to prove inductively the essentially moral tendencies of a trading society. We are now in the midst of the conflict engendered by the increased determination of the people to assert themselves, their desires, and their interests,

and the readjustment which must take place of the old nature to the new conditions and its own best interests under those conditions has no more than begun. So far nothing is very conspicuous except the conflict itself, and the selfishness which is partially a cause and partially a result thereof. We very much fear that the average working-man has not as yet learned to discriminate between desires the gratification of which are helpful and those the gratification of which are in part or in whole injurious, and the reason for self-denial is doubtless more frequently than anything else lack of opportunity. We see man arrayed against man and class arrayed against class-all of them struggling unscrupulously to compass their own ends. We see differences are arising between the extremes of wealth and the extremes of poverty; we see that an appalling amount of misery is being created because millions of weaklings are falling behind in the race and are being crushed almost to formlessness. Here and there, perhaps, the conflict has been temporarily exhausted and passed into the higher stage of co-operation; and doubtless mankind has already won from circumstances a certain permanence of condition and enlargement of leisure and opportunity; but these facts are not themselves sufficient to convince a sceptic that industrialism as such is making for morality. Is it not sufficient that industrialism, in order to obtain its own ends, will necessarily become progressively more human. The very conflict is decidedly more moral than the torpidity which preceded it; and conflict is always a method of eliciting permanent good from temporary evil. Wealth or machinery may and probably will injure a man or a society that has not earned it; or that has earned more than he or it is capable of taking care of. Then, indeed, it causes luxury, sloth and dissipation; and the wealth passes away with its unfortunate possessors. But the wealth that is ours at the present day is for the most part earned; and when earned, is not misused-unless it be true as some tell us that human nature is utterly lacking in staying power. That proposition we have no intention of discussing. It may be that the structure of our present society is built on sand; but even if our present society passes away as did that of Egypt and many others, civilization will endure. We assume that mankind contains within itself a high and powerful principle that is capable of realizing itself through all obstacles and gathering to itself all things. Our present industrial movement is the mightest effort yet made by this principle to subdue circumstances to its own uses, and turn the crude earth into a well-furnished house

for the human race; and so, we believe that the industrial tendency must in the end make not only for morality, but for a morality, which is far from being merely utilitarian.

If it be true that the interests of morality are in the long run being served by industrial development, we may be very sure that the interests of art will not suffer. As a matter of fact those interests, which we take to be the interests of culture in general, need the very conditions which an industrial society tends to bring into existence. We have tried to show that such a society by its use of machinery tended to increase to its maximum the efficiency of human labor, while at the same time the moral nature of the process prevented the field of consumption from increasing in anything like the same proportion. Consequently a highly-developed industrial society must tend to become a society in which there is a great deal of leisure; and leisure, bringing with it as it does, comparative freedom from harassing cares, is in the long run a condition of culture. We all know that persevering and energetic natures are sometimes able to reach a high standard of artistic achievement in the face of harassing cares and occupying duties, but ordinary human nature would be unequal to such a strain. In the past, periods of rich artistic achievement have generally been periods of considerable material prosperity, and while both of these results were doubtless manifestations of the same spiritual leaven working among different kinds of people, yet the material prosperity did something to assist the artistic achievement and so, unless culture is always to remain the possession of a favored few among mankind, the freedom from sordid occupations which hitherto only these few have been able to obtain, must become the birthright of the many. It is true that our industrial development has not as yet done very much for art, and it would be very difficult to prove from any of the facts of our present conditions, that it was likely materially to assist the finer processes; indeed a sharp antagonism exists between the representations of wealth and those of culture. This antagonism, however, must be only superficial and temporary. We are ready to admit that our present society will not be renowned for what it has achieved in art and literature, because high attainment in spiritual expression needs a wholeness and serenity of nature which the modern man does not possess. Nevertheless, we believe that some consolation can be derived from the fact that whatever the quality of our present artistic production, its quantity is probably larger than that of any other time. The larger popularity of

art is evidence of wider interest, and even if this interest is not very intelligent, its existance is a fact that should not be ignored. It is, perhaps, the first indication of a truth which often needs preaching-the truth that democracy is not simply a political doctrine. Its ends are not obtained by universal suffrage, and a realization of the doctrine of equal rights and opportunities. Democracy in its widest application is simply the humanization of the human race; and in order to be humanized we must first be measurably liberated from the pressure of external circumstances. When this liberation takes place not through any fortuitous combination of circumstances, but because it has been really earned, then we may be sure that it will be put to the best possible uses, and that the material accumulations will be exceeded by the spiritual growth.

But, it may be asked, what shall be done in the meanwhile? Shall we sit still and listen to the vulgar prating of them that can see nothing but good in the present stage of the process, and who laud machinery as an end in itself? We answer that such ignorance and error should be exposed on every possible occasion. If there is anything in the process which we have outlined, many, many years must pass before it can be consummated; and during all these years people who can get beyond the prevailing standards should, and, of course, will do so. As long as machinery is devoted to serving interests of the poorer and baser sort, the process cannot obtain even a relative degree of permanence, because permanence is essentially derived from the subordination of circumstances to interests that represent not merely a phase of human nature, but also an abiding, developing, constituent element in our larger selves. But individuals may strive for permanence, and anticipate the final outcome. The error made by Walter Crane and too many other

pseudo-moralists is to assume that culture can find an immediate home in the human race even as it finds an immediate home in a few exceptional individuals. But just as a high standard of culture demands that the individual live over again in epitome the history of mankind, so must he anticipate in his own person our educational future. Pending, however, the progressive elimination of arbitrariness and accident in human relations, the standards for the individual and for the people are very different. Of the individual we demand that he develop all the larger elements in his personality and meet his conditions fully and sturdily; and we demand that he do this in the few score years that are his own. There is a sense in which humanity is a personality also-a personality which has reached a certain stage of development, and one that cannot be hurried on to the end all at once. The next step must come next. The relation of particular personalities to the general personality is complicated and responsible. On the one hand the individual's spiritual welfare demands that he separate himself from the mass, and from this point of view his worth is measured by the extent and completeness of this separation. Yet when separating himself from humanity he must in another sense keep in close contact with his fellow-men

"Who sweats not with the flock will seek in vain To shed the words which are ripe fruit of sun."

Indeed we believe that the intimacy of the union is a condition of the vitality of the separation. Our ideas must be realizable; but they must not be realizable in full. So far as they are not realizable, the individual is isolated and devoid of immediate result. He passes as a progressive moment in the history of mankind. But although thus swallowed up in the process he is realized and justified as the process gathers to fullness.

-Editor.



AMERICAN ARCHITECTURE.

Studies. By Montgomery Schuyler. With illustrations. pp. ix., 211. \$2.50. Harper & Bros.

I F the object of architectural criticism is to public, or of that portion of the public which is interested in works of architecture, how cordially ought we, in the still hopeless bewilderment of the public mind on these subjects, to welcome every honest and intelligent effort in this direction. Mr. Schuyler's present effort is unquestionably honest and in the main intelligent. He has a sufficient understanding of the difficulties which lie in the way of any prosperous solution of the intricate and novel problems which must engage the architect of to-day, and is not too much inclined to severity in considering his inevitable failures, while he has a warm word of appreciation for his occasional successes. His instinct for good architecture is generally true; he admires the really good things and condemns the bad. This is to say that he is a much more than ordinarily competent and trustworthy critic, at least as far as determining the merit of an architectural work is concerned.

with a Point of View, and unfortunately again, this point of view is a moral one. It seems odd of Mr. Ruskin, lighted up once more in these critic, lamenting at the end of the century the too early death of the Gothic revival. Mr. Schuyler of restoring that union of architecture with buildhe declared that-

"The real radical defect of modern architecture educate the judgment and taste of the in general, if not of American architecture in particular, is the estrangement between architecture and building-between the poetry and the prose, so to speak, of the art of building, which can never be disjoined without injury to both. . . . If you were to scrape down to the face of the main wall of the buildings of these streets you would find that you had simply removed all the architecture, and that you had left the buildings as good as ever. . . .

"It is, I believe, historically true in the history of the world, with one conspicuous exception, that down to the Italian Renaissance, some four centuries ago, the architect was himself a builder. The exception is the classical period in Rome.

. . . The Romans simply pierced their wall with arches and overlaid it with an envelope of the artistic expression of another construction which they coarsened in the process. According to some accounts they hired Greek decorators to overlay it with this architecture which had nothing But Mr. Schuyler is unfortunately troubled to do with it, and there was the first illustration in all history of this difference between the art of architecture and the art of building. In every to see the "Lamp of Truth" which burned so other country in the world the architect had been brightly for a season a generation ago in the hands the builder. I think that is true down to the Italian Renaissance, and then building was really later days, and brandished about by an American a lost art. There hadn't been anything really built in the fifteenth century, and they began to employ general artists, painters and sculptors and in explaining his point of view to be the necessity goldsmiths, to design their buildings, and these men had no models before them except this ing, or rather that identity of the two which he Grecian-Roman architecture of which I speak. believes to have been lost at the period of the These men reproduced that in their designs and Renaissance, makes use of a speech which he left the builder to construct it the best way he delivered last year at a banquet of the National could; and that I am told is a process which Association of Builders in New York, in which sometimes prevails in the present time. But before that everything had been a simple developbuilding; and since that men have thought they perceived that architecture was one thing and Sant' Annunziata, the beautiful Cappella Pazzi, building another, and they have gone on to design and the great Hospital of the Innocenti. But buildings without any sort of reference to the above all, the dome of the Cathedral, one of the materials of which they were composed or the most stupendous and difficult pieces of pure conmanner in which they were put together."

is the last place in which one would look to find a carefully considered statement on a question of architectural history, we think it is to be regretted that Mr. Schuyler did not before adopting this as Piccolomini at Pienza, the Ca d'Oro and Ca the central argument of his printed book, and as the best statement he could make of the views at Verona and Padua, and the great Hospital at and principles which governed his serious architectural criticism, subject his speech to a more strict examination and revision. Had he done so, we feel sure he would have avoided some of the important errors into which he has fallen. Let us look a little at his several points.

First there is this old sarcasm of architecture appliqué. The Romans built their monuments and then "applied" the architecture; the structed in the arts both of design and construcengineers did the building; the Greek artists did tion. But will Mr. Schuyler seriously maintain the architecture. But this is to confound architecture with decoration. It is true, no doubt, that the Roman walls were built first and decor-Baths of Caracalla, of the Basilica of Maxentius, with which the wall surfaces were adorned. The building was in itself a magnificent architectural conception, of which the grand effect lay in the constructive forms as truly as was the case in the Greek or Gothic buildings. No doubt the Roman was lacking in the æsthetic instinct of the Greek. But to say that he "built with no more thought of art than a modern railway engineer has in building a truss bridge," is to put rhetoric above the truth of history. And indeed, as a matter of fact, what is the peristyle of the Greek but " architecture appliqué," and if Mr. Schuyler's scraping process is to be carried out impartially, what will be left of the temple but the bare cella?

Next there is the surprising statement that at the period of the Renaissance in Italy, building was a lost art. "There hadn't been anything built in the fifteenth century." Now the Renaissance began early in the fifteenth century, and if the Freemasons who succeeded the monks of the at that period the art of building was lost, it must have been lost by the race of builders who preclaim that nothing was built in the fourteenth century. But let us look at the fifteenth. In three chapters on "Queen Anne," the Vanderbilt Florence alone, that century saw the building of houses and the Brooklyn Bridge, which were

ment of the construction and the material of the the great palaces of Pitti, Strozzi and Riccardi, the churches of San Lorenzo, San Spirito and struction in existence, the work from beginning Now considering that an after-dinner speech to end of Brunelleschi, was begun in 1420 and finished, with the exception of the lantern, in fifteen years. Such structures as the Spanocchi palace at Siena, the Bevilacqua at Bologna, the Dario at Venice, the beautiful Communal palaces Milan, are further examples taken at random of the sort of building which went on all over Italy (excepting in Rome) during this century when the art of building was lost.

Mr. Schuyler remarks that "they had to employ general artists, painters and sculptors and goldsmiths, to design their buildings." The inference is that these persons were makeshifts and uninthat the group of men which included such names as Bramante, Brunelleschi, Alberti, Michelozzi, Baccio Pintelli, Cronaca, and a score of others, ated afterwards with engaged orders. But what all architects of the fifteenth century-or their then? The architecture of the Pantheon, of the successors of the sixteenth-Peruzzi, San Gallo, Sansovino, Vignola, Palladio, Fontana, and the consisted not only in the columns and entablatures rest-are to be spoken of in terms of disparagement, de haut en bas, as men "who thought that architecture was one thing and building another," and who "went on to design buildings without any sort of reference to the materials of which they were composed or the manner it. which they were put together? The fact is that the architects of the Renaissance were, with the exception of the ancient Romans, the boldest and most skillful builders whom Italy has ever known. The history of the Lombard and Gothic periods is a history of continual disaster from crumbling piers and falling roofs, and of the churches of those times which remain to us, multitudes are kept from falling into instant ruin only by the iron rods which tie them together in all directions. The only race of builders with whom the "general artists" of the Renaissance need fear comparison is that of the great Gothic architects of the North, and notably Middle Ages.

We have lingered so long over this four-page ceded that movement. Mr. Schuyler does not introduction that we have little space left for the book itself. Nearly one-half of it is taken up by of which the subjects have in that time lost much of their interest. Most of the other half is given to a review of the architecture of Chicago, St. Paul and Minneapolis, written with a vivacity of style which makes it eminently readable. We are not concerned with the author's criticism of individual buildings, East or West, though we may observe in passing that the prevailing tone of it seems to indicate an ill-restrained fondness for chaffing the architects or patting them on the back, as the case may seem to require, to an extent and with a freedom which is open to objection in a serious work of criticism. But in spite of frequent crudities of statement and many wild and whirling words, his judgment is generally just and his criticism is generally sound His remarks on the failure of the Chicago architects to make use of the extraordinary opportunity offered them by the great fire, those on the "commercial palaces" of Boston and New York, and those on the Richardson mania which has been so deadly in its effects (temporary, we are now beginning to hope) on the design of the younger architects, seem to us especially judicious and wise. On the last subject indeed it was time that somebody should speak and speak plainly. Mr. Richardson's personal force and enthusiasm were so great and the success of his best work was so brilliant and telling, that it is no wonder that his obstinate mannerisms were so easily condoned, or that, as Mr. Schuyler says, his work "excited an admiration which if not inordinate was at least undiscriminating and misapplied," not only among the general public but, more disastrously, among the lighter-minded architects, who saw in his gigantic arches and stunted columns and rough-faced walls a short and easy road to favor and success. The result is little less than frightful. If, as must be admitted, the masculine vigor of Richardson did sometimes degenerate into coarseness and even to brutality, the work of his imitators rarely rises above that level; and the monstrous births all lack of it; for the true artist will recognize and over the land bear witness to the force of the imditions and governing principles which marks the practice of the arts in this country.

In the chapter on the Brooklyn Bridge, Mr. power forever.

written and published eight or ten years ago, and Schuyler turns the Lamp of Truth full on that imposing structure, and finds it wanting, because the great piers do not express their purpose. "A drawing of one of the Towers without its cables would tell the spectator nothing; the structure itself will tell our New Zealander nothing of its uses." The conception is mechanical, not monumental, and he contrasts the bridge towers with the Cathedral towers of Amiens, Paris and Strasburg. We confess to some impatience with such a comparison, with such a test. The Brooklyn towers are ugly, not because they are not "sincere," but because they are the work of an engineer who made no pretensions to a knowledge of architectural composition, and who probably thought nothing about it. No such mass of masonry is fine by accident, and no accuracy in the expression of practical purpose would have helped the matter at all.

The paper on "An American Cathedral" disappoints the reader in telling him nothing of the project which seems now to be in a fair way to be carried out, of building a Cathedral of the firstclass in the city of New York, but in discussing chiefly Mr. Richardson's unsuccessful design for the Albany competition. Mr. Schuyler has, however, some judicious remarks concerning the reasonableness of building a great Cathedral in New York, in which we seem to see a half acknowledged suspicion of its absurdity. Why not admit at once and frankly that the Cathedral is a mediæval monument, as the castle was, or the monastery; and that to go to work in cold blood at the close of the nineteenth century to build such a monument in New York, is as ridiculous as it would be to surround the city with a wall and moat. Mr. Schuyler says the proposed Cathedral will be the glorification of the "Lamp of Sacrifice." We say on the contrary that it will be the fruit not of devotion or sacrifice, but of ambition and pride, and so far from indicating a noble feeling for art, will but indicate the painful acknowledge, with whatever regret, that the Gothic pression left by the great architect, and also to Cathedral, like the Greek Temple, is a thing of the danger which lies in the absence of all tra- the past, and that though a pale counterfeit of it may be within the reach of the swollen fortunes of Wall Street, the real thing is beyond their

RAYMOND LEE.

CHAPTER VIII.

THE NUN OF EASTCHESTER.

THE gathering at the organist's house was an event which occurred annually in June. In great measure social intercourse in Eastchester was a matter of method and routine. There were, for instance, certain festivities which the Dean had established which were as strictly a part of the regular life of the town as the services in the Cathedral; so were the tea parties given by the Misses Huggins; the New Year's ball at the Oaks, where Lieutenant-Colonel Leo of the Yeomanry lived; the dinners of Stanislaus Perkins, Esq., J. P., and the children's party at Christmas time at Miss Batters' Select Establishment for Young Ladies. Smart Charley Bangs, who was studying law in London, said it was at these gatherings that the ennui of the town could be seen in a state of full activity; but, then, Eastchester, in the narrow sense in which we are speaking of it at present, had its opinion of Charley Bangs. In short, not to go too deeply into the matter, the organist's party was one of the regular events of the year which Eastchester expected and, in part, attended.

The Dean was present, of course—a broad-shouldered, authoritative, condescendingly pompous man, with a large face, heavy dark eyebrows and bushy side whiskers which only partly concealed his fat double chin. His voice was loud and his laugh, which existed chiefly as an attendant upon his own ponderous jokes, was still louder. No one could doubt

that the Dean considered the Dean a man of wit and parts. His wife was with him, a bony woman, addicted to poplin and shawls, who had grown spiritually pallid in her husband's shadow. The two Misses Huggins, also, were present. They were emphatically the old maids of Eastchester, the acknowledged representatives of virtuous spinsterhood. Miss Harriet Huggins, the younger of the two, was very flat in person and very dowdy in dress. Her laughter was always in a state of unstable equilibrium. It ran before her wherever she went. She frankly accepted the state to which Heaven had consigned her, and thereupon had been blessed with the compensating gift which Providence apparently bestows upon spinsters who are at the same time forty and pleasant—a hand of rare lightness and cunning in the pastry line. The fame of her cakes was as wide as Eastchester itself. Her jams were unsuccessfully emulated in every household, and her jellies and custards were regarded as something in the nature of secret preparations. There was a perpetual demand for her talent. No party was ever given in the preparations for which Harriet Huggins did not play a part. Her activity extended also in another direction. Her ability as a nurse was quite as marked as her capacity as a pastry cook. Whenever there were additions to her friends' families-and dear how frequent they were—she always presided at the mysteries. Bangs declared she was the goddess of maternal convalescence omitted by the Greeks in their enumeration of Olympus.

Miss Sarah Huggins, her sister, was two years her senior. Far from accepting her unrelated condition to mankind, she persistently protested against it. With her, marriage was still a desperate possibility. People said she coaxed the situation by artificial devices. Those competent to judge such matters declared that the size of her waist was unnatural—timider spinsters added "most unbecoming in one of her age." She dressed nattily, wore small boots, which may have been the reason why her gowns were so perceptibly shorter than her sister's. The subject "Men" in all its many aspects and ramifications interested her intensely. She read novels assiduously for the light they threw upon

the progress and development of love affairs. More than once she had even forced little John Stimson Oldboys, who was very timid and quite bald and unconquerably nervous in women's society, to discuss the nature of Love, and when he stammeringly protested his ignorance she rapped his knuckles playfully declaring she was afraid he was a sly fellow. In short, we may as well confess it, her lines were laid among all the unmarriageable men in Eastchester, and no angler ever watched for a bite as eagerly as she did.

It was into this coterie that Ralph Winter dropped on the evening of his arrival at Eastchester. Good Mrs. Carrol, whose motherly heart Ralph had completely captured, whispered to her guests an elaborate and largely unveracious history, (though I am sure the old lady believed every word of it) concerning her visitor. After the manner of such tales it entirely lacked that proportion which after all is the essence of veracity. Whispered information stirs the imagination in a way that no outspoken word can, and Mrs. Carrol's sly corner confidences about the great wealth of Ralph's parents, the young man's travels, rare musical ability and triumphs in two continents, raised the expectation of the party to the point of self-delusion.

Mrs. Carrol was particularly explicit with Marian Pilgrim concerning Ralph. In doing so the old lady probably had no particular ulterior intent. Mrs. Carrol was too simple a soul to be a busy match-maker, but she was a woman, with woman's constant unconscious pressure toward the emotional side of life. Romance is ever lord of woman's dominion, and to her heart, thank Heaven, has been consigned the keeping of an imperishable enchantment for the world. What is there in our friend Stubbs, my dear sir, but two hundred pounds of dull corpulency and a nature that rises to its highest power before a dish of sweetbreads, a steak chateaubriand and a bottle of Burgundy. Yet, despite his bald head, you know, he is the hero of a little woman's life. Hard as it may be to believe, she sees a light in those eyes quite invisible to us, and hears music in that lackbreath voice to which we are dull. An hour of his selfish existence given to her will sweeten days and days of sacrifice.

When Ralph entered the organist's drawing-room and was introduced to the people present, he had no idea of how stimulated the curiosity of everybody concerning him had been; consequently the attention he received pleased him greatly, for it seemed that he had fallen into very agreeable and sympathetic company. He impressed the women favorably at once, for Ralph was of the sort of men whom all women easily like and consequently few ever love. No, madam, your antipathy is another woman's attraction. You can surely measure the intensity of your neighbor's feelings in one direction by your own in another. Thousands of good, bad and indifferent fellows are married every twelve months, because half marriageable womankind wouldn't have them at any price. Why, Miss Brougham there is infatuated with dwarfs, and Miss Cheesely dotes on Harry Chubbs, that great inanity, than wed whom you would rather die. She admires muscle. Even that lisp of his and his second-hand jokes and everlasting talk about athletics she has told me in a confidence which, perhaps, I ought not to betray "are perfectly adorable." But these facts are part of that deep philosophy of life without which, histories like this one of ours could not be written, and Ralph's disposition was entirely too much engaged with itself to pay any heed to so impersonal a thing as philosophy. He believed that every surface indication of interest contained something of the abandon of a woman's heart, and that women absorb love with sentiment. What nonsense! Why, De Gourka, the Governor of Siberia, assured me that frequently he has won women's love with the knout. I believe that does not often occur out of Russia, but I confess that probably no history of love would be quite complete without a chapter on the influence of brutality over the affections.

Ralph did not so favorably impress the men; this may have been because he did so favorably impress the women. He rather diminished for the time being the importance of the Dean, and with the partial eclipse of that dignitary there was a total eclipse of all his satellites. Of course at an early hour the conversation took the direction of America, and naturally passed into interrogatories which

no one was capable of dealing with but Ralph. The Dean endeavored to acquire an authoritative position by establishing Cincinnati on "the great lakes," a town to which he said an old parishioner of his had emigrated ten years before.

"And it was so funny," chimed in the Dean's wife. "Do you know he put 'O' after his address in the three letters he sent to the Dean." With her, her husband was always "the Dean."

Bangs said he would like to go to "the States" because it was "such a jolly place to shoot game, and that sort of thing." Miss Sarah Huggins wanted to see an Indian chief, she thought they looked so manly, a wish which shocked Miss Batters, who, as principal of a select establishment for young ladies, could not overlook the insufficiency of the Indian's attire. The Dean, then, attacked the problem from a theological position. He had always deeply regretted, he said, the indifference of the United States government to the religious welfare of its heathen subjects. This emboldened the Rev. Arthur Kneesman, a young curate still in a pale state of sanctity, to simper that he had been given to understand that infidelity was woefully rampant among all classes in America. In his estimation, it pointed clearly to the need for an established Church.

Ralph was a bad conversationist, because the least verbal irritation or opposition of ideas angered him inwardly and made him objectionably earnest. In this case, the very superior air of the young curate's simper annoyed him. He asked sternly what was meant by "infidelity," and upon receiving from the curate a hesitating but most orthodox and limited answer, declared that spiritual wisdom or faith, as with worldly wisdom or experience, was possessed by few in any fullness until they were forty. He didn't believe, he continued, that any man ever found God in the Bible. Only those who had sinned and suffered passed into the Presence, and then Life had taught them a creed that was deeper than the Athanasian.

The curate pronounced such views "shocking," but the Dean, as the voice of Authority and a man of over forty,

interposed judiciously that while there was "no doubt a deal of truth in what Mr. Winter had said, the necessity for Faith pure and simple to salvation, quite apart from any belief derived from experience, could not be disallowed."

"I am sure Mr. Winter's meaning is not as extreme as his words," said Marian Pilgrim, who had listened to the conversation intently.

"Indeed it is, Miss Pilgrim," said Ralph, positively.

"Doesn't that support my statement?" asked the curate, appealing to the party.

Where the argument might have led to it is hard to say, but Mrs. Carrol, observing that matters were coming to close quarters, broke in with a request for Mr. Winter to "play something." Everybody save the curate supported the desire loudly, and Ralph sat down to the piano with perturbed feelings to animate his playing. He attacked the Dean and consigned the curate to the purgatory of fools with an intensity of musical expression that astonished the little gathering. They had never before heard the piano used as a musical instrument, and Ralph's fingers really had acquired that nameless conjury over the keys which is the gift of mastery.

"Splendid! Splendid!" cried the Dean loudly, as Ralph arose from the piano. "Bravo!" And the company applauded mildly and fluttered about the room, rather relieved, if the truth may be told, from the tension under which Ralph's playing had placed them.

"By George, Miss Pilgrim," whispered Charley Bangs, "that American can play. You were impressed I could see. It may be classical and all that sort of thing, but I must say I don't admire music with so many scales in it. What was it?"

"The last piece Mr. Winter played was something of Liszt's, I think," said Marian, smiling.

"Ah, yes, Miss Marian, you're up in that sort of thing, I know."

After leaving the piano, Ralph strolled into the garden, at first with Mrs. Carrol and Miss Batters, but, after a while the two ladies were called to look after the refreshments and he was left with the elder Miss Huggins.

"I was just saying to Mrs. Carrol," said Ralph, striving to get aback of some congenial topic, "how much I deplore that there are no old places like Eastchester in my country."

"But no doubt you have a great many things that we have not. I have always heard that America is such a wonderful country," said the spinster, good-naturedly.

"A wonderful country, yes," said Ralph, "but charming in so little. We believe, at home, you know, that the salvation of the world has been consigned to our keeping, but, for one, I'd rather not be in the new Ark, if it is to be of American manufacture."

Miss Huggins giggled. "You were not talking in that strain to the Dean," she said, playfully.

"No, for he annoyed me, or rather that curate annoyed me, Mr. ..., I forget his name."

"Oh, Mr. Kneesman. He is Miss Pilgrim's curate. Don't you think he has a saintly face? He has such a sweet voice—but you should see him in his surplice."

"Miss Pilgrim's curate?" asked Ralph.

"He officiates at her workingmen's chapel in Smeltham."

"Her chapel?" asked Ralph.

"Ah! It is plain you are quite a stranger here, Mr. Winter, for everybody who has been any time in Eastchester knows all about Marian. 'Our Marian,' we call her."

And then a long and gushing tale was unfolded to Ralph about Miss Pilgrim, not altogether without interest to him, because he could associate it with a pretty face. substance of what Ralph learned was that Miss Pilgrim lived very near to the organist's house, in a small modern villa which her father had built in the beautiful grounds which formerly belonged to old Mr. Groat, who, the reader may remember, died many years ago without a will, possessed of very great wealth. Under such circumstances the old man's demise was regarded as something of a personal loss by everybody in the town—the possibilities were so numerous and attractive. Mr. Pilgrim himself was well off. He lived very quietly, and rumor had it he devoted his time impartially between two all-absorbing occupations: eating curry and writing a great history about "one of the wars," Miss Huggins didn't know which, they were so many. To eat curry was almost as remarkable a feat, she thought, as to swallow swords after the manner of Jack Bareback in the circus, and as to the history, everybody was convinced of the greatness of the work, because Mr. Pilgrim said it was a great work, and that when finished "it would upset a great many people's notions."

It is always interesting to discover the sources of fame, for not unusually, like great rivers, it rises in little springs and grows great by merely traveling onward and absorbing tributaries.

Pilgrim called his place "The Bungalow," and lived apart there with his "great work," and his Indian man-servant, named Chutney, who cooked his "messes." The remainder of the house was given over completely to his daughter, who made it chiefly an adjunct to the charities and schools in which she was interested.

"She spends nearly all her time and her money, too," said Miss Huggins, "in her schools in Smeltham. You must surely run over to see them, Mr. Winter; there are nearly two hundred children in them now."

"She seems to be a very interesting girl," said Ralph, shortly, and we may as well confess it, the reserve betokened a large reticence on h.s part.

"Everybody loves Marian, she is so different from our other girls. Do you know, Mr. Winter, she puzzles me at times. She says so little and does so much. I can't understand a girl being so purposeful, can you, Mr. Winter?"

"Of course I don't know Miss Pilgrim," said Ralph. "but I like to see a girl, as the saying is, with her mind made up, guided by some inner active principle; always providing it doesn't harden her or render her less sympathetic and susceptible to the softer influences of life. In sharpening the outlines of things nothing of the color must be lost."

Ralph delighted in adopting this sort of tone; there was a good deal of the larger kind of schoolmaster—the moralist—in him.

"Oh, no! certainly not," said the spinster, positively. She didn't quite understand Ralph, but felt that his remarks ealled for something emphatic. "But I didn't think you men cared for positive women."

"I should judge that Miss Pilgrim is a really romantic girl," said Ralph, throwing out a line for information.

"That's what Mrs. Carrol says. She declares Marian doesn't think; she dreams."

"That's woman's best way always," said Ralph. "Life's a very colorless affair with her when she is out of dreamland."

"How foolish, Mr. Winter," exclaimed the spinster, laughing. "Why, here's Marian and Mrs. Carrol. Marian, dear, what do you think Mr. Winter has just been saying? He says we women live—what was it, Mr. Winter; please repeat it?"

"I was saying," said Ralph, a trifle confused, "that women are really happy only when they are in dreamland. What do you think, Miss Pilgrim?"

Marian's arm was around Mrs. Carrol. In the faint evening light Ralph could just see her eyes fixed on him for a moment, then turning to Mrs. Carrol, she asked, softly:

"Have you or I ever been in dreamland?"

"I believe you are always there, Marian," said the old lady, tenderly.

The girl kissed her and drew her closer to her.

"Dear Mrs. Carrol, that is part of your dreamland. Mr. Winter must be right."

"I am sure I never dream," said the spinster.

"Ah, Sarah," said Mrs. Carrol, gently, "we have to acquire the faculty when we're young. Eh, Mr. Winter?"

Before Ralph could reply, Marian said to the old lady:

"I must be going now. You won't mind, will you; I promised papa that I would surely return before nine o'clock."

"I wish you didn't have to go, Marian. Can't you remain a little longer and Mr. Winter will play again for us. Won't you, Mr. Winter?"

"Certainly, if it will please you," said Ralph, and more than half his answer was addressed to Marian.

"I would like to stay. I have never heard anyone play as you do, Mr. Winter," said the girl, simply. "I hope

She paused with a little confusion and turned to Mrs. Carrol. "I would stay if I hadn't promised."

"I know, dear. It is all right. I won't try to keep you. Mr. Winter will see you home I am sure."

Marian protested against the suggestion, but Ralph was too willing, for the protest to avail anything.

Beyond the organist's gate the Cathedral rose in full view before Marian and Ralph as they turned into the Close from which ran High street. Rising against the moonlit sky, the dark pile was like a huge black shadow rather than a material thing. The moon was yet hidden below the high roof, so that our two friends saw the outline of the building, towers and spire and buttresses, faintly edged with silver light as an aureole. The night seemed to be slumbering in dreams. There was a witchery in the air as though fairyland was opening and spreading its enchantments over the earth.

"How beautiful! How beautiful! Oh, oh!" cried Ralph in crescendo, with enthusiasm that was in large part real enough, though it did not lack that certain fictitious element of exaggeration which was never absent very far from Ralph's topmost moods. "Why have we not to-day the art of those old Gothic builders. They so wrought stone upon stone that the merely material became spiritual. Of course, you have read Ruskin, Miss Pilgrim?"

"I have read very little of his," replied Marian, shortly, who womanlike was feeling her way cautiously with her new acquaintance.

"Do you know, probably I should not be here now but for Ruskin," said Ralph.

The girl's curiosity was aroused.

"How so, Mr. Winter?"

"When I left college and determined not to join the church Do I surprise you? Yes, I would have joined the church could I have done so honestly, but" Ralph paused.

"But what? Mr. Winter excuse me; perhaps I ought not to ask?"

"No, no!" said Ralph, who was ready enough to talk

of himself. "My mother's desire was that I should be a clergyman in the Episcopal Church, that is the Church of England as we have it in America. I studied for some time with that in view, and, so far as I could then see, my belief in the tenets of the Christian faith was real and firm. But the day of trial came and—well, proved it to be hollow enough."

"And you gave up your intention?"

"And I gave up my intention. What else could I do?"

"Do you always give up at once when you encounter difficulty?"

There was a sting in this question so directly and simply asked. Ralph felt the conversation instantly lifted above

mere passing chat.

"No, indeed," he replied, stoutly; "I think not. But mere determination will not bring back belief, Miss Pilgrim. Something had not been taken from me, but destroyed, utterly destroyed; how completely I realize only when I endeavor to return, as sometimes I do, to my old position. I might as well try to get back into yesterday." The vehemence of these last words startled the girl.

"But, of course, you do believe something?" she asked,

"Nothing," said Ralph, who was in the mood to take the extremest position possible. "Nothing."

"Oh, Mr. Winter, you cannot mean that." The girl's pious mind was alarmed. "You believe in God?"

"The God of the Bible? No, Miss Pilgrim; I do not, I cannot, nor have I yet reached any other god."

"You do not believe in God?" she said, slowly groping a way among strange facts. "Nor in Jesus Christ?"

"No; much as I revere the Nazarene's character and teaching."

" Nor in the soul's immortality?"

"No; nor in that."

"Oh, Mr. Winter." Ralph could see his companion was trying to scan his face through the darkness. The depth of the reproach in the utterance of his name and the pity it contained was not unpleasant to Ralph.

"Miss Pilgrim, I ought not to speak to you of these

things. Your belief is so much worthier and, in a certain sense, surely so much truer than my unbelief. I have pained you?"

"Me? No, no! It is not that. I do not understand you." For a space the two pursued their way in silence. Ralph was annoyed with himself for having spoken so freely. Marian had said strictly what was so; she did not understand. She was dumbfounded, for her own belief was so complete within its own narrow limits that it was well-nigh impossible for her to comprehend anything beyond it. Ignorance of God she could indeed understand, for the Rev. William Goodhue, who had labored for so many years as missionary among the natives of the Guano Archipelago, had told her when she give him the last check for the "good cause," of how woefully unenlightened those ferocious heathen were; how they worshiped their totem Jam in the dense forests with indescribable orgies, smearing their bodies with a pomade made chiefly, according to the pious missionary's analysis, of the blood and the marrow of their enemies. But Ralph was not a heathen, he wore clothes and was civilized, and it seemed to her a stupendously unnatural fact that he did not believe very much as she did and as everybody else did whom she had ever known. She shuddered as she thought of what Ralph had said. It was a soul pronouncing its own damnation. What could she say to this man? A minute before he was to her but a stranger, who had momentarily impressed her by his playing and by his personality. Now, her interest in him was made of stronger stuff. But before her thoughts had assumed any definite position she found herself at her own door. Ralph had bade her good night before she could speak.

"Mr. Winter," she said, hurriedly, "next Wednesday I shall have a little party here. Will you let me expect to see you? I shall be very glad if you will come."

Ralph accepted the invitation readily.

On the way back to the organist's the words "I shall be very glad if you will come" echoed and re-echoed in Ralph's ears with a pleasant sound, for he invariably made much of such speeches; but, on the whole, the events of the evening

left him with an uneasy feeling of dissatisfaction. The inharmonious element in his nature predominated.

"Bah," he said, "why don't I take people and things as I find them?" and he was discouraged and uncomfortable.

Many people have said that in Marian Pilgrim, at the period of her life with which we are now concerned, one could witness a very subtle and delightful blending of the childthe child's simplicity, frankness, ingenuousness-and the maturer woman whose predominant characteristic was a quiet, steadfast seriousness. Nature, that great, very partial mother of ours, has her favorites upon whom she lavishes moral endowments as upon other of her children she lavishes physical beauty or well-being, or other gifts. Certainly she had bestowed upon this quiet, brown-eyed little nun of Eastchester, a marvellous moral warmth and graciousness-let us say in a word, the beauty of righteousness, which, Heaven helps us poorer beings, is a thing so different from that sleek broad-cloth grace acquired with hymn in the meeting-house, or from the spiritual firmness, won by some very few of us, in the fierce struggle with our own weaknesses and with the army of the world's desires. With her, belief was not a matter which she could possibly view apart from her own intimate self. It was not the final insistence of experience as it is with some of us, nor the voice of authority, as with others. It was not an acquisition at all, any more than is perfume with the flowers. As Heaven has its heroes and messengers on earth, so, perhaps, it has its rare unconscious witnesses, to be gentle lights among men, bearing not the word of Faith, which it is so hard to comprehend, but the spirit and essence thereof.

"Little credit for such faith," would the Dean say in his curt, positive way. True indeed! little credit to such. The Dean is a practical man, and like practical fellows is given to cutting his wisdom into pieces, this bit to be placed here, and that bit there. So unlike, in this respect, his friend, the Rev. John Fargus, who never could discover a beginning or an end to wisdom—for wisdom with him was a line between two infinitely separated points—or any statement, though broad as man could make it, that was sufficiently wide to cover the smallest fact in life. Little credit indeed, good Dean; and

what then are we to say of our Judgments? Is it possible to rightly estimate conduct if we recognize that character is an endowment as well as an acquisition. Do we not judge people as though all started in the race on the same footing? "William Slough," says the Law sternly, (poor Devil it is the first time in years anyone has addressed you by your Christian name, your companions preferring your alias, Pugnose Slough), "an intelligent jury of your fellow-countrymen have declared you guilty of a crime which makes you a disgrace to mankind (righteous mankind!), etc., etc., etc., 'the peroration and point of which is so many years of penal servitude. William Slough is then hustled off out of sight of human eyes to the influence of stony walls and hearts (good enough for him!) almost as hard. The Law recovers from its indignation, wipes its gold spectacles, goes home with unimpaired appetite to dine well in its comfortable home; while Society over its breakfast the next morning rejoices that Justice has been done, thanking God that it is not as other men are. Of course only a weak sentimentality questions the eminent rightness of all this. Is not the eternal relationship between William Slough, the Law and Society therein recognizeds? The first thus get his deserts, the second performs its duty, the third is protected. Admirable, and withal how simple! Could Heaven do better? What need of the great final court of appeal, with its awful day of Judgment? Indeed, what need is there? Can it be, William Slough, that Omniscience will consider defects of birth and deficiencies of education? Your coarse soul has no hope. I know, that perhaps Justice there may not be hardened into a code, but instead may flow from the great human heart of Christ. Give me thy hand, William Slough; you and I, we need equally the same mercy, not the same Law. What may pardon thee may not save me from everlasting condemnation, for pug-noses I notice do not get on to the bench, nor the broad judicial brow into the squalid haunts of crime as but dear me, what an inconsequential wandering, sermoning habit a pen may acquire. We were speaking of Marian Pilgrim.

It is scarcely necessary to point out how very different Ralph Winter's character was from hers. The indirect, the

self-conscious, the morbid, predominated in his nature, and, as with all sentimental people, there was an element of the false and unreal in his moods. Some souls defy the gods, and others there are that serve the gods. I know not which is the greater of the two. Ralph, certainly, was incapable either of defiance or of service. His nature was too strong for himself, and as with an overpowerful brain in a feeble body, the result was weakness. His strong sympathy, too, kept him eternally wavering; he was swayed by every new influence, intellectual and emotional, but the impetus lasted scarcely beyond the moment of contact. As we have seen, the result of his conversation with Marian Pilgrim was discomfit. He felt he had made a poor impression upon her. "I wonder what she thinks of me?" he asked himself, and he could not bring the answer to flatter him.

The direction of Marian's thoughts were away from herself towards him, striving for comprehension. A certain charity of religion interested her in him.

On her way upstairs, after leaving Ralph, she turned into her father's room. The historian, clothed in an Oriental-looking dressing-gown and smoking-cap, was busy with his great history. He dropped his pen, and as she took a seat on a little footstool by his side and rested her head against his arm, he brushed back the loose hair from her forehead, and lifting up her face to his, leaned down and kissed her.

"You are getting to be very like your mother, Marian, more beautiful every day. No, let me hold you so. Your face upturned like that sometimes looks out at me from the writing paper."

Now this little speech did please Marian.

"What! looking at you out of those battles, father?" she asked, shyly.

I am sure the woman was in Eve, even in the days of innocence in Eden.

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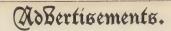
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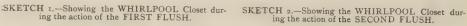


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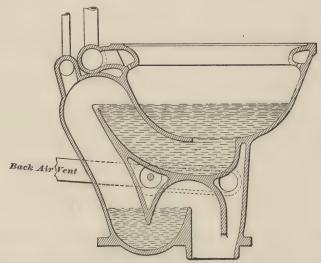


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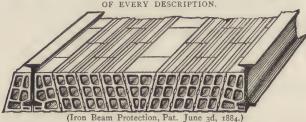
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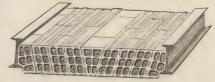
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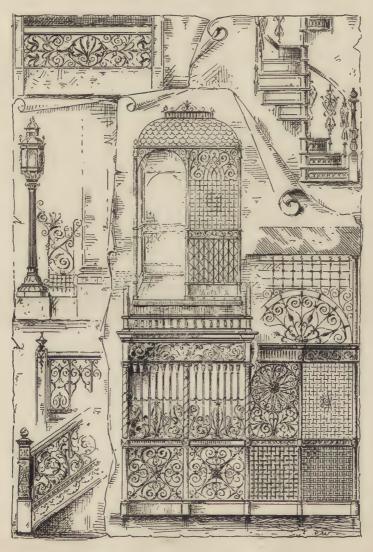
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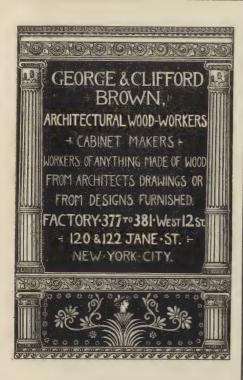
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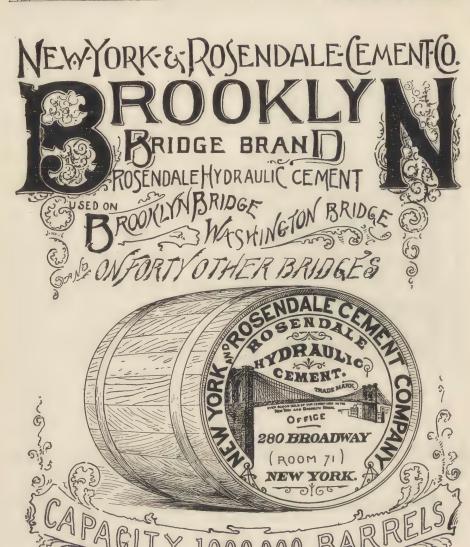
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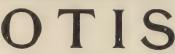
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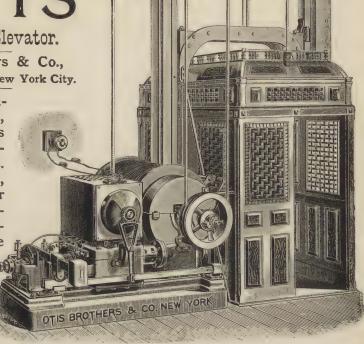


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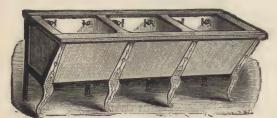
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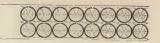
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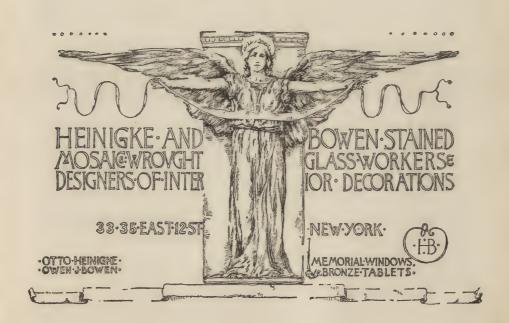


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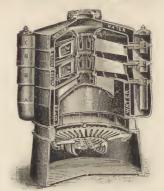
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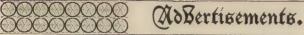
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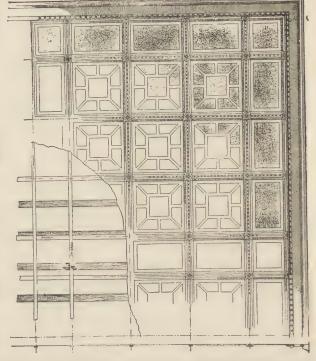
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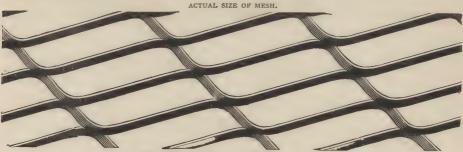
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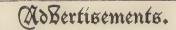
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CONTENTS.

TEMPLE ST. JEAN, POITIERS, Frontispiece
FRENCH CATHEDRALS—No. I.,
HISTORY OF TERRA-COTTA IN NEW YORK CITY, With 17 Illustrations. JAMES TAYLOR.
VARIOUS CAUSES FOR BAD ARCHITECTURE, WM. NELSON BLACK 14
THE GRAMMAR OF THE LOTUS,
WATCHMAN WHAT OF THE NIGHT? (Poem),
MODERN FRENCH RESIDENCES. Illustrations,
BYZANTINE ARCHITECTURE. (Secular),
THE NEW BLEECKER STREET SAVINGS BANK AND SOME
ARCHITECTURAL ABERRATIONS.—No. V.,
CROSS-CURRENTS. (Editorial),
NEW BOOKS. (Reviews),
RAYMOND LEE.—Part VI.,

ILLUSTRATIONS.

Eglise St. Etienne, page 126; A Church Interior from MS. in Library of Troyes, 130; Map of French Cathedrals, opposite page 134; Capital from St. Denis, 135; Montauk Club, Brooklyn, 136; Residence, East 36th Street, New York City, 137; Russell & Erwin Building, New Haven, Conn., 138; Astor Building, New York City, 139; Warehouse adjoining Grace Church Parsonage, New York City, 140; Harrigan's Theatre, New York City, 142; Lincoln Building, New York City, 143; Catholic Apostolic Church, New York City, 146; Residence on West 36th Street, New York City, 147; Residence, 10th Street, New York City, 150; L. I. Historical Society Building, 152; Casino Theatre, New York City, 154; Moss Building, New York City, 155; Cotton Exchange, New York City, 161; Racquet Club, New York City, 164; illustrations to "The Grammar of the Lotus," 165 to 179; French Residences of Bois de Boulogne, Paris, 186, 187, 188, 189, 190, 191; D., L. & W. R. R. Office, New York City, 192; Theotocas, 193, 194; St. George Salonica, 196, 197; Daphne, near Athens, 198, 199; Santo Sophia, 200; Plans of, 201, 202; Apse of, 203; Section of, 204; Pendentures, Construction of, 205; Byzantine Cupalo, 207; Bleecker Street Savings Bank, New York City, 209; The Arundel Apartment House, Baltimore, Md., 210; Mail and Express Building, entrance of, 211; United Charities Building, 212; The Daily Record Building, 214.

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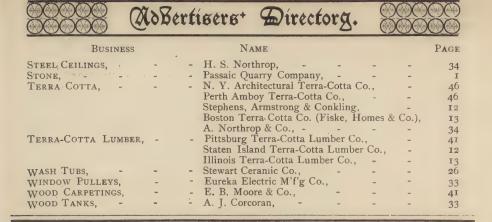
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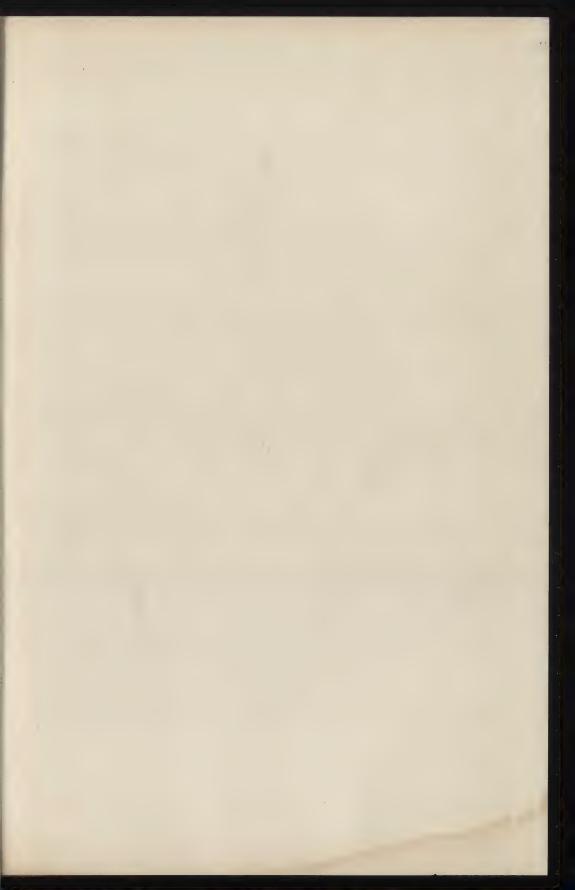
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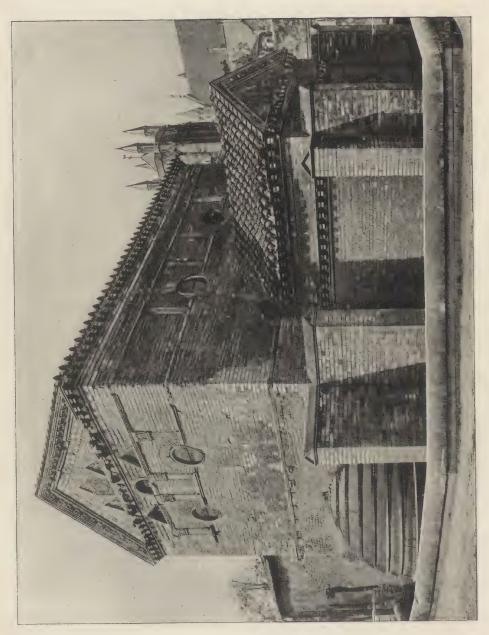
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I.



mercial dining misinformed indeed. tables of the

what they were saying. Presently, some new comers came in, speaking in that tongue too little heard in French cathedral towns — English. Their compatriots looked at them in amazement. "Fancy," exclaimed the gentleman, "they speak English."

was at the table country is consumed with amazement d'hôte at Char- when it is intimated there are finer and tres. There was grander cathedrals in France than in the usual com- England, and the person bold enough pany that gath- to make such a statement runs the risk ers at the com- of being looked upon as most singularly

Notre Dame alone, of the great smaller French churches of France, enjoys a worldcities. The only wide celebrity and is seen of all men, English speaking guests besides myself but only because it is in the one and were a lady and gentleman busily only Paris. Other churches, as great engaged in discussing the wondrous monuments of art, with histories scarce-cathedral, oblivious of the fact that ly less momentous, are ignored altoone was present who understood gether by the vast army of sightseers who yearly precipitate themselves upon Europe in search of the rare and the beautiful. Students of architecture need not be told of the beauties of French cathedrals. Notre Dame, Laon, Soissons, Reims, Chartres, Senlis, Sens, Bourges, Tours, Troyes, Noyon, Le The surprise so frankly expressed is Mans, Angoulême, Angers, Coutances, the same that every visitor to the great Rouen, Séez, Bayeux, Amiens, Beauvais, churches of France experiences when are names as familiar as Canterbury, he realizes the amazing beauty and ex- Lincoln, York, Ely, Peterborough, quisite art in these too much neglected Durham, Winchester, Salisbury, Wells, buildings. Americans and English alike Gloucester, Worcester, Lichfield, Norare to a certain extent permeated with wich, Rochester, Oxford, Westminster the idea that there is no architecture Abbey. But apart from those who take out of England as good as that within a studious interest in the subject the it. The average tourist from either great achievements of French cathedral

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II.

Vol.II.-2.-2.

architecture are a sealed book even to and the cathedrals of England. The the most indefatigable of European English churches are of England English, those of France French. Of two Within the boundaries of modern different people they represent two dif-France, no less than one hundred and ferent civilizations. The motives that fifty cities have been the seats of bish- inspired the one were not the motives ops, each of whom had his cathedral. that inspired the other. Architectural But there are not now as many cathe- forms were different, though similar. drals in France. Fourteen sees were And so foreign cathedrals need not be united, forming now but seven. A considered in a study which has for its number of others date from modern subject the cathedrals of France. Fortimes, and have cathedrals of little eign parts borrowed very much more architectural interest. The four bish- from France than they returned to it. oprics of Savoy have but lately come Gothic architecture reached its highest under French jurisdiction, and may, point of perfection in the Ile de France, therefore, be omitted from the list of which, in the thirteenth century, was an actual French churches. But even architectural centre, a school of art and these reductions leave a very large a storehouse of knowledge of building number of cathedrals, though unfortu- and building craft scarce surpassed in nately they are not all of the same the history of civilization. The Gothic interest. Perhaps a score of these churches of England and of Germany churches are known to general readers; are more illuminated by the study of by far the larger part are strange French cathedrals than the French names of strange places, sometimes churches benefited by a comparison

To understand the architecture of the without saying, there is ample material cathedrals it is necessary to go back a for exploration and adventure here, and bit to the time prior to the cathedral in fact it has only been within a very building age. The cathedral is simply few years that the River Saône has the bishop's church, and though usage been explored from the Rhône to its has to a certain extent limited it to the source, by a company of English and mediæval and modern building, the American travelers. It is a significant basilica was frequently as entirely a commentary on the propensities of the cathedral as the later edifice. Whataverage tourist that hundreds of thou- ever may have been the primitive form sands of people traverse Europe each of the cathedral, the transition from year, are thoroughy satisfied they have the early basilica to the cathedral is seen everything worth seeing, left unex- well marked and readily traced. The plored no nook, left hidden no treasure, Christian church apparently passed from left unvisited no single point of inter- the private room in the private house est, and are wearied with the "beaten to the private basilica attached to many tracks" of foreign travel, while whole Roman houses for oratorical purposes, rivers are unknown and three-fourths and which was sufficiently developed to of the cathedrals of a thoroughly serve as the germ of subsequent strucaccessible and most delightful country tures. The early Roman basilica bore never so much as glanced at. Fortu- little resemblance to the Gothic cathenately there are indications that this dral in appearance or in construction, state of affairs is passing away; it can- but in plan the cathedral is simply an not go too quickly, nor should the extension and modification of its predegreat beauties of the French cathe- cessor. The basilican plan was a T, drals longer remain unknown to the that of the cathedral a cross. In the reading or traveling public of America. basilica the apse was applied immediately behind the transepts, which were short or absent altogether. The altar stood under a canopy on the chord of It is unnecessary to draw a compari- the apse, the semi-circular recess of son between the cathedrals of France which was utilized for the seats of the

bishop and higher clergy. Before the apse, stretching into the nave, was the choir, bounded by low walls, with an ambon or reading desk on either side. The altar, the choir, the seats for the clergy, the reading desks or pulpits comprised the essential internal parts of the church.

Admirably suited as the basilicas were to the ritual of the early church, they were most uninteresting architecturally. The low exteriors, devoid of decorative features, inclosed a nave and two aisles, though double aisles basilicas and the cathedrals, their difwere included in some of the larger ference in expressing the relative delighted by plain windows. Mosaic was teriors of the early Christian churches, derfully effective and brilliant decora- of the incipient stages of Christianity. conspicuous external feature. ternal instead of external.

the earlier, and the reasons which unedifice illustrate and explain the reawere built for Christian purposes, con- than was occupied by the nave. secrated to Christian usages. Christian ritual suggested certain architectural essential parts was still adhered to, but ideas; Christian customs necessitated a multitude of decorative arts now

lows that, in order to understand any which tales of Christian heroism and

phase of it, the ideas which brought it into existence must be thoroughly comprehended. The Christian principles and ceremonies practised by the Church were the chief motives in determining the form and disposition of the basilica. In reality, however, it was far from expressing the ulterior ideal of Christianity in architecture. The accomplishment of this task was reserved for the builders of the mediæval cathedrals, and enormous as are the structural differences between the buildings. Rows of columns supported velopment of Christianity is not the clearstory of the nave, which was less marked. The low and mean exthe chief decorative art employed; it which the small tower scarcely made was lavishly used and formed a won- conspicuous, were thoroughly typical tion. A single tower, round, and of If the Church realized its power over which the churches at Ravenna pre- men it was not yet ready to express it serve the best type, formed the only in its buildings. In the cathedral no The such hesitancy is exhibited. It was church was prefaced by a large court the largest building in the city; its or atrium, and by a porch; sometimes the massive walls, ornamented with two, atrium was omitted altogether, occa- four, six, seven or nine towers-if we sionally the porch or narthex was in- take the original intentions of the builders indicated in the ground plans In studying the French cathedrals -rose high above every surrounding or, in truth, any group of cathedrals, it building. The transepts were strongly is well to keep in mind the primitive marked and were provided with fronts type of the Christian church, since the scarcely less majestic and imposing later forms are but the amplification of than the great western front itself. The choir was now wholly beyond the derly the construction of the primitive transepts in an arm of its own, making the plan markedly cruciform; in place sons which produced the development of the shallow apsethere was a circlet of of the more complex. In studying any chapels forming an unparalleled archiphase of Christian architecture it is ab-tectural perspective, and sometimes solutely necessary to remember the covering, with the choir, as in the Christian ideas underlying them. They cathedral of Le Mans, a greater area

Within, the primitive programme of certain parts. It is true enough that took the place of the mosaic of the the cathedrals are splendid studies in basilica. Carving, painting on glass, architectural art and evolution, but it wall painting, rich work in metals and is also true-though very generally in precious stones and enamels and overlooked in architectural text-books elaborate tapestries, every art of an -that they are equally noteworthy as artistic age was pressed into the serexamples of Christian thought and vice of religion, and helped to illustrate the truths of Christianity. The sculp-Architecture being an idea, it fol-tures and glass paintings especially, in

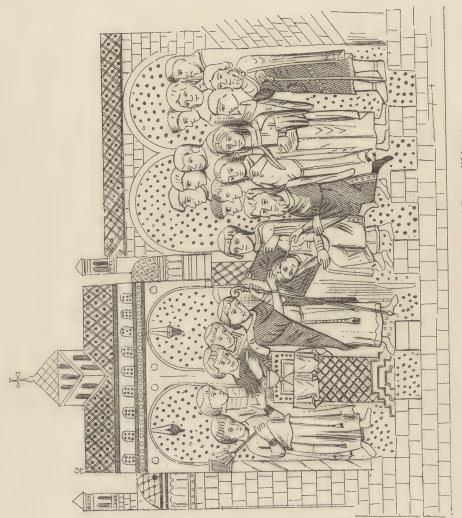
doctrinal parables were set forth in a speedily surpassed the cathedrals in thorough way than it had been Roman. In the eleventh century monastic fervor The missionary enterprise and pious took a fresh lease of life. Mont S. fervor of the monks had carried both a common religion and a common S. Étienne at Caen, S. Benoît-surarchitecture to all parts of Europe.

III.

Few chapters of architectural history are as fascinating as that relating to the monks. In modern times it is the fashion to look upon the monks as the most unprogressive product of civilization; the art work they produced is a the latter an outgrowth of the former, of the monks which in no way was more did, between them, the bulk of the thoroughly manifested than in archibuilding of the Middle Ages. This con- tecture. Seven hundred and two new densation, as it were, of the building monasteries were established in France interests, hastened the growth of one in the twelfth century; in the thirteenth style of architecture, which was further but two hundred and eighty-seven were strengthened by the constant move- added to the number already existing. ments of the master builders and worktypes.

pictorial language all could under- architectural grandeur. As far back as stand, helped to make the cathedral the time of Charlemagne and his immethe most Christian of Christian edifices. diate successors the monastic establish-Christianity had long since passed the ments in France had been very numerexperimental stage; the civilization of ous and some of the most famous Europe was Christian in a more houses had their origin at this period. Michel, S. Georges at Boscherville, Loire renewed their youth or came into existence. The abbey of Cluny was founded in 909. The great church, however, was not begun until 1089 and its narthex not finished until 1220. The abbey of Cîteaux, the mother house of the Cistercians, was founded in 1098. From this institution came an immense number of monasteries. orders sprang into existence, and the sufficient commentary upon such criti- eleventh and twelfth centuries were cism. The monks and the lay builders, especially characterized by the activity

The monastic churches, without premen from one point to another, thus serving either the style or the form of widely distributing the knowledge of a the basilicas, are the connecting link single form of work. Gothic archi- between them and the cathedrals. In tecture did not fail to assume national France the preliminary problems of the character in different countries, but its Romanesque were largely worked out modifications were variations on one in them, and they thus paved the way model, not the evolution of distinct for the Gothic, the art par excellence of the cathedrals. The change from the The English cathedrals are better basilica to the cathedral is a story of types of monastic buildings than are constructional progress. Few archithe French. The typical English cathetectural problems are so complicated dral was a monastic church; the typi- or so interesting as the transformation cal French cathedral was a secular of the basilica into the Romanesque church, a monument built by the secu- church, and then the birth of the lar clergy as an offset to the immense Gothic. Yet there is no more delusive popularity of the monks among the study than the ascertaining of the people, a popularity too well illustrated actual beginnings of the Gothic style. for them in the magnificent churches That it originated in the Ile de France and monasteries thickly scattered over does not admit of doubt, but as it is Europe. For although cathedrals never known in its most developed form it lost their importance ecclesiastically as did not originate at any one spot. seats of bishops, the rise of the monks Gothic characteristics abound in many was so rapid, especially the Cistercians French buildings which cannot in any in the eleventh century, who came into sense be called Gothic, and the most existence about the time of the revival that our present knowledge permits is of building, that the abbey churches the determination of some one edifice



A church interior, from a MS. in the Library of Troyes. XIth century.

in which Gothic characteristics appear poured into the treasuries of the monks. with such completeness as to warrant It was in these circumstances that the its being accepted as a genuinely building of the French cathedrals was Gothic structure. And this, it is now undertaken. admitted, is the abbey church of Morienval. It would not be proper to development of a great architectural say that in this building Gothic archi- style could be imagined than the cathetecture had its origin, but here the dral era, the reign of Philip Augustus. characteristics and component parts It was, above all, an art age; art, in were first grouped in one structure, one shape or another, but especially in which, it is well to note, was a monas- architecture, was the most expressive tery church.

Gothic. abbey church of S. Denis.

monasteries went so far as to boldly them. deny the authority of the bishops and Rome. thoroughly realized the necessity of of civic pride such as the Italian asserting themselves, and engaging in cathedrals of Florence, Sienna, Pisa or some enterprise that would excite wide-S. Mark's at Venice. They were retheir coffers the vast sums annually democratic church that undertook them

No more auspicious time for the form in which people gave expression The new style spread quickly; S. to their intellectual and religious feel-Etienne at Beauvais, the churches of ings. The building of a cathedral not Cambronne, of Angy, of Thury-sous- only excited the greatest enthusiasm as Clermont, of Bury, of Noël-S. Martin an enterprise of vast magnitude, but as are some few examples of what a re- a work in which every one had some cent writer has termed rudimentary personal interest. Romanesque archi-The church of Poissy, the tecture had reached a point where the choir of S. Martin des Champs, Paris, Gothic was its natural and logical conthe church of S. Pierre, Montmartre, sequence; the experience gained in the the abbey church of S. Germer and earlier edifices gave the builders of the S. Martin at Étampes are specimens newer that self-confidence necessary to of a transitional style, more developed undertake venturesome experiments in than the preceding group, and at Gothic churches. The spread of the the end of which stand the base of monastic orders helped largely in the the towers of the cathedral of Chartres, new work, carrying skilled knowledge part of the cathedral of Sens and the of the style to distant quarters, and creating a taste for the Gothic art The architectural activity of the where otherwise, perhaps, might never monks was an unmistakable indi- have existed. The rapidly increascation of their tremendous hold ing power of the French sovereigns, upon the people. The eleventh and and the constant additions made to the twelfth centuries saw the culmination Royal Domain, not only gave a necesof their wealth and power. The monas- sary stability to French life, and greater teries were the single source of cul- encouragement to building enterprises, ture and learning; they commanded but brought a larger extent of country the intellect of Europe and contained under one ruler and rendered ideas and the leaders of men. Their resources art more uniform. Both politically and increased with enormous rapidity, artistically the preliminary stages reenabled them to build great establish- quired for a healthy artistic growth had ments and magnificent churches, and been passed. It needed but the stimufinally caused their ruin in making the lating action of the bishops to arouse monastic life luxurious. The secular the people to architectural enterprises clergy viewed the rapidly increasing greater than they had heretofore underpower of the monks with unconcealed taken, and which would create their uneasiness. They had a large personal own structures, built with their personal following among the people, and some help and money, by them and for

More than any English cathedral, maintained an independent connection the French cathedrals are people's The French bishops churches. They were not the product spread public interest, and bring to ligious in their origin, but it was a

and carried them, as near as may be, to estimate properly the full effect of to completion. A church like Notre the architecture of the Royal Domain Dame, or Amiens, or Chartres, or Rouen upon the whole of France. standing in the centre of a busy, bustling city, the houses of the people crowding its very doors, the market place, the chief place of assembly perhaps before daily active thoughts of the people than a Canterbury or a Salisbury or a Gloucester in its grassy close, apart from the noise of the worldly life, a distance of the active concerns of men. These were monks' churches, built by the monks and for them: the French cathedrals are monuments of secular and popular religious enthusiasm and feeling, that gives them a unique place in the history of humanity, of religion, and of architecture.

Yet the movement here termed that small portion of the great country and here Gothic architecture reached its highest development. Modern France is the union of many districts together by rather loose ties. The hisunder the rule of the monarchy, and hence it was that the great architectural development manifested in the Royal Domain was only partly reflected in the other districts. The Cathedral of Provence, of the early thirteenth century, was a very different building from the Cathedral of the Ile de France of the same time. It is only later that northern fashions came into vogue in in the fourteenth and fifteenth centuries than in the thirteenth. This fact does not, however, lessen the claim of the churches of the Ile de France to be known as typical French churches, Gothic had all but closed, it is possible the Apostle Paul as one of his compan-

IV.

The ecclesiastical history of France the great west portal, came closer to the goes back to the earliest times. Provence is rich in the legends of men and women personally connected with Christ. Very early a goodly company journeyed down into Gaul, having been, silent, uninterested spectator from the so runs the tale, driven from Jerusalem by persecution. There were Mary Jacobi, the sister of the Virgin; Mary Salome, the mother of the Apostles James and John; Martha, Mary Magdalen, Lazarus, who had been raised from the dead; Restitutus, the man born blind who had been healed by Christ; and a servant Sarah. It may be readily imagined that men and women such as French, and rightly so, was confined to these would leave indelible marks of their work. Lazarus founded the bishwe now call by that name, known as opric of Marseilles, Restitutus that of the Royal Domain. Here it was that S. Paul-Trois-Châteaux; Mary Jacobi the building enthusiasm chiefly centred, and Mary Salome settled in the now and here Gothic architecture reached desolated town of Les Saintes Maries; Martha founded the church of Notre Dame des Doms, at Avignon, in honor which in the Middle Ages were held of the still living Virgin, and endeared herself to the people of Tarascon by tory of that time is largely concerned delivering them from a dragon which with bringing these outlying regions threatened their destruction. The tombs of the Marys may still be seen in their city of Les Saintes Maries, and the good folk of Tarascon cherish the memory of Martha and the dragon to this day with their immortal Tarasque.

Nor were these the only travelers of Apostolic times in Gaul. Pontius Pilate was exiled to Vienne under Caligula and committed suicide by precipitating himself from the summit of the Mont Pithe south, and the developed Gothic is lat, in the Cevennes, which is still known more to be sought in southern France by his name. At the head of the list of the bishops of Béziers stands the name of S. Aphrodisius, who was, so the story says, governor of Egypt when the Virgin and Joseph went down with the infant Jesus. Converted after the Asnor the conditions under which they cension, he resigned his lofty post, was were built to be accepted as typi- baptised, and became a humble bishop cally French conditions. From the in southern Gaul. Still another name vantage ground of the end of the six- is that of Trophimus, the famous first teenth century, when the reign of the bishop of Arles, who is mentioned by

his journeys. Paul, the first bishop of conversion of Clovis-in which S. Au-Paulus, the proconsul converted in Cy- and bishops of the native British prus by the Apostle Paul when Elymus church being of too dim personality to the Sorcerer withstood him.

of the times are crowded with the in the cathedrals of the Middle Ages. names of holy men who hesitated at no the periods of episcopal development in as in religion the usages of Rome and Gaul: no single century, save the of Italy would be closely followed. He fourteenth exceeding them in the numtells us that the basilica built by Bishop ber of foundations. The years 1317 Perpétuus at Tours was 160 feet long, and 1318 saw the erection of fifteen 60 feet wide, and 45 feet high from sees, chiefly by the conversion of floor to ceiling. It had thirty-two monastic establishments into bishop- windows in the choir, and twenty in the rics. The revolutionary epoch, in which nave. It had 120 columns, and eight fifty-six sees were suppressed, alone doors, of which three were in the choir approaches these first centuries in and five in the nave. And then, after episcopal changes.

French ecclesiastical history is the ing some references to the services held conversion and baptism of Clovis, bap- there. As this edifice existed when the tised by S. Remi at Reims on Christ- description was written, it may be asmas Day, 496 or 497. The conversion sumed to be fairly accurate, but it was of the emperor Constantine had scarce a building of exceptional importance. more momentous consequences to Obviously the pious bishop allowed his western Europe than that of the Frank- rhetoric and fondness for the marvelous ish chieftan. While it is doubtless to get the better of him in describing true that the savage Frank fell far the baptism of Clovis. The church, he short of the modern idea of conversion writes, was sumptuously adorned, briland well doing, it is from this event liant with the light of innumerable that the real beginnings of Christianity tapers, and filled with perfume of such may be counted in what is now known sweetness that those who were present as France.

No English bishopric antedates the the air of Paradise.

ions who accompanied him on one of year 597—one hundred years after the Narbonne is said to be one Sergius gustine landed in Britain, the clergy have historical value, however great Whether there be any truth in these their ecclesiastical interest. Yet at tales we need not inquire; certainly this time Gaul was thickly dotted with there is no need to demolish them. It bishoprics; in the sixth century it conis more to the point, perhaps, to know tained two hundred and thirty-nine that the first authoritative reference to convents, and from the sixth to the the Christians in Gaul is the slaughter- eighth no less than eighty-three ing of a thriving cummunity at Lyons church councils were held within its in a persecution in the year 177. From borders. When the light of the that time on the list of French bishops Church first illumined Britain the foun-rapidly increases. In these good old dations had been firmly laid in Gaul for days every bishop was a saint, or that superstructure which was to find deemed so by posterity, and the records such complete and glorious illustration

Each primitive bishop had his cathesacrifice in carrying the Gospel of dral, though what manner of edifice it Christ to distant and unknown regions. was we can scarcely conjecture. The Many of these names are now lost be- Historia ecclesiastica Francorum of yond recall, many others cannot be Gregory of Tours, while abounding in accurately dated. Omitting doubtful interesting details of the early history ones, and accepting only ascertained of the Franks, is peculiarly deficient in dates, fourteen sees had their origin in archæological information. We gather the third century, thirty-five in the from his narrative that the basilican fourth, thirty in the fifth, and twenty- form was usual in Gallic churches, as five in the sixth. These centuries were would be natural, since in architecture these highly interesting arithmetical de-The culminating event in early tails, he leaves the subject, simply addsupposed themselves to be breathing

edifices of which now no stone remains more closely followed in more important upon another, and of which our knowledge is so limited. Both wood and stone seemed to have been used as the attributed to the eighth century by building material, the choice depending, perhaps, upon both conveniences and the means at hand. But the descriptions of Gregory and the few other early writers who make mention of architecture in any way must be taken with some allowance for their ideas of the importance of the buildings. Certainly until the time of Charlemagne early stage of the wheel or rose win-Gaul was in no condition to support expensive or elaborate church buildknowledge to build them. Such few edifices as have survived from the ninth century are apt to be better guides to the earlier structures than the impassioned and patriotic descriptions of ecclesiastical chronographers.

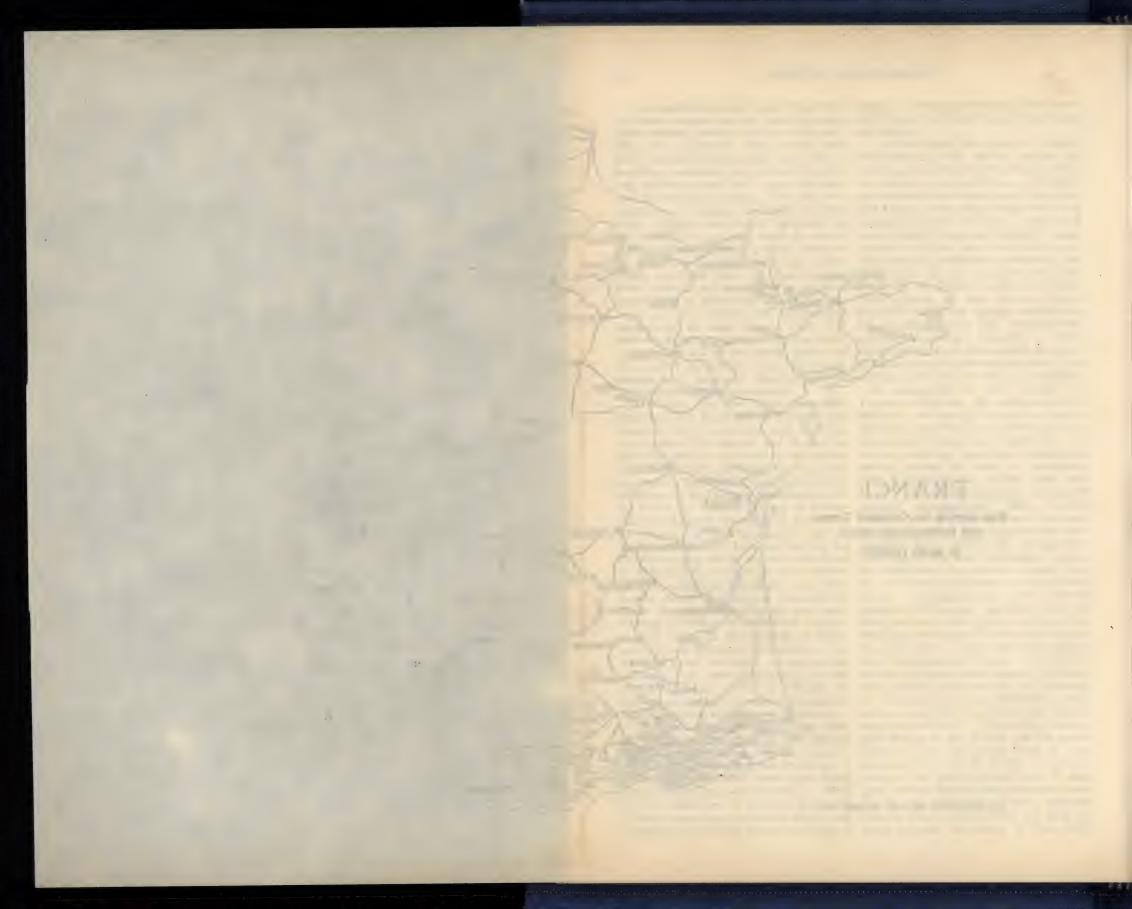
Buildings like the Basse-Œuvre at Beauvais, the Baptistry at Poitiers, the churches of Savesnières and Gennes, the crypts of S. Aignan and S. Avit at dral of Chartres, the churches of Cravant, near Chinon, of S. Généroux (Deux-S. Pierre at Vienne (Isère), of Vieux-Pont-en-Auge (Calvados), of S. Martin at Angers, of S. Christopher and S. vious modeling after S. Vitale to the abilities of northern architecta

It is needless to undertake to restore church building which may have been structures.

A capital from the crypt of S. Denis, Lenoir, gives us the exterior and interior of a church and enables us to form some notion of architecture at this time. The façade shows two towers with low pyramidal roofs. In the centre is a round-headed doorway, greatly exaggerated in height, and over which is a round-headed window representing an dows of the French mediæval front. The interior of the church, which ings, nor was there the mechanical stretches along the capital parallel to the facade, exhibits five round arches supported on single columns. Two of these columns are interrupted in order to make place for the worshippers. The furthermost bay is occupied by an altar.

A manuscript in the library at Troves, exhibiting the miracles of S. Benedict and dating from the eleventh century, contains an illustration of a much more pretentious structure. As Orléans, part of the crypt of the cathe- in the preceding example a transverse section across the choir is combined with a longitudinal section down the Sèvres), of S. Laurent at Grenoble, of nave. The choir shows two arches, an unusual arrangement which would bring a row of columns down the centre of the nave. Two explanations are Lubin at Suèvres (Loir-et-Cher), of La possible here: either the central col-Couture at Le Mans, which in whole or umn behind the altar indicates an apse, in part may be attributed to the Mero- in which case the columns would not vingian and Carlovingian eras, show be continued in the nave, an hypothesis better than the ancient descriptions which is strengthened by the curved what manner of buildings the early apses which appear on either side of French churches were. With Charle- this portion of the figure; or the artist, magne began a new epoch in archi- deeming the space filled by the altar tecture, and his chapel at Aachen is not too wide for a single arch, has drawn only a great advance on preceding two for appearance's sake. The probedifices, but, notwithstanding its ob- ability is that we have actually a transat verse section, since the art of drawing Ravenna, a really important monument at this time had not sufficiently mastered perspective to render any other It is well to remember, however, that explanation likely. The really imporall the great churches of the earliest tant things in the sketch are the semitimes were destroyed to make room for circular apse on either side of the later and more sumptuous buildings, if choir, which may be taken as indicaindeed they had not fallen into decay tions of the semi-circular form of one from inefficient workmanship. Most apse, rather than as two separate apses of the churches of Merovingian and one at each end of the church; and the Carlovingian eras are very small and central tower, erected over the altar to rive few hints of the Italian methods of give greater emphasis to this part.





The arcade under the roof of the apse towers, with their open galleries at the shows a *motif* in high favor in Italy; top, doubtless represent the façade of the roof of the choir, represented in the building, and, like the decoration projection, shows the same. The two of the apse, indicate Italian models.

Barr Ferree.

The cathedrals marked in the accompanying map may be classified as follows:
Cathedral cities with ancient cathedrals, in **bold face** type:—Agen, Aire, Aix, Albi, Amiens, Angers, Angoulême, Auch, Autun, Avignon, Bayeux, Bayonne, Beauvais, Belley, Besançon, Bordeaux, Bourges, Cahors, Carcassonne, Chambéry, Châlons-sur-Marne, Chartres, Clermont-Ferrand, Coutances, Digne, Evreux, Fréjus, Grenoble, Langres, Le Mans, Le Puy, Limoges, Lyons, Meaux, Mende, Moutiers, Nantes, Nevers, Nîmes, Paris, Péregueux, Perpignan, Poitiers, Quimper, Reims, Rodez, Rouen, S. Brieuc, S. Flour, S. Jean-de-Maurienne, S. Malo, Séez, Sens, Soissons, Tarbes, Toulouse, Tours, Troyes, Tulle, Valence, Vannes, Verdun, Viviers.

Cathedral cities with modern cathedrals, that is built after the sixteenth century, in CAPS;-Arras, Cambrai, Gap, La Rochelle, Marseilles, Montauban, Nice, Pamiers, Rennes. The cathedrals of Belley, Montpellier and Annecy have been so completely modernized as to warrant inclusion in this class, to which also Orléans cathedral properly belongs. All these sees are of ancient foundations, but the cathedrals of Blois, Laval, Nancy, Versailles and Alais, which are modern churches, except the last, which is much restored, are of modern foundation.

Cities formerly sees of bishops, now without episcopal rank, but containing ancient cathedrals, in SMALL CAPS: - Agde, Apt, Arles, Auxerre, Bazas, Béziers, Bourg, Carpentras, Cavaillon, Châlonssur-Saône, Condom, Die, Dol, Elne, Embrun, Entrevaux (Glandeves), Forcalquier, Grasse, Laon, Lavaur, Lectoure, Lescar, Lisieux, Lodève, Lombez, Luçon, Mirepoix, Maguelone, Narbonne, Noyon, Oloron, Orange, Rieux, S. Bertrand-de-Comminges, S. Lizier (Conserans), S. Omer, S. Papoul, S. Paul-Trois-Châteaux, S. Pol-de-Leon, S. Pons-de-Thomiéres, Saintes, Sarlat, Senlis, Sénez, Sisteron, Tréguier, Toul, Toulon, Vabres, Vaison, Vence, Vienne.

Non-episcopal cities with modern cathedrals, in italics: - Castres, Dax.

Cities not now episcopal with ruined cathedrals or with none at all, in roman :- Alet, Antibes, Avranches, Boulogne, Eauze, Maillezais, Riez, S. Servan (Aleth), Thérouanne, Mâcon.

Modern sees with ancient churches, that is, churches not built as cathedrals, now used as such,

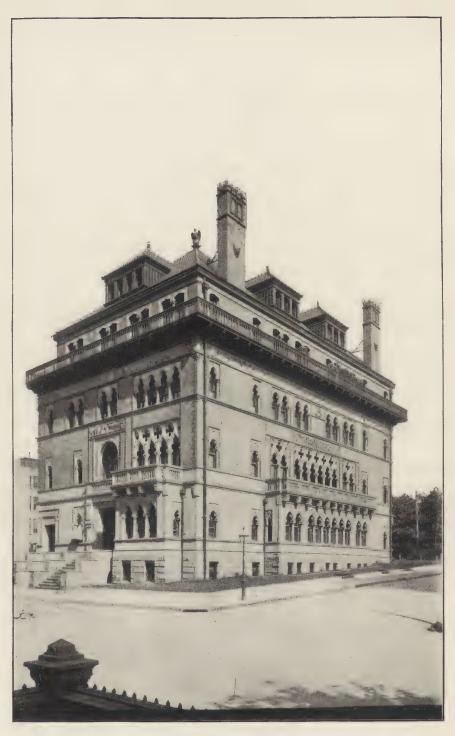
tall Condensed Letter: - Dijon, Moulins, S. Claude, S. Dié, S. Denis.

This classification is general only; it is independent of the amount of restoration or modern additions the buildings classed as "ancient" may have been subjected to, as well as to whether they were originally built as cathedrals or not. The cathedral of Ajaccio in Corsica is not included in this list.

Both Arras and Cambrai had mediæval cathedrals which were destroyed at the time of the Revolution. The present cathedrals are modern. The cathedral of Riez has been rebuilt during this century, but as the see was suppressed in 1801 prior to the rebuilding it cannot now be rightly termed a cathedral.



Capital from S. Denis. VIIIth century.



Brooklyn, N. Y.

MONTAUK CLUB.
(See page 145.)

F. H. Kımball, Architect.



THE FIRST TERRA COTTA BUILDING ERECTED IN NEW YORK CITY. East 36th street, near Madison avenue.

THE HISTORY OF TERRA COTTA IN NEW YORK CITY.



gaged in a study of the various materi- was prompt and positive: als used for the exteriors of the buildgentleman was Marcus Spring, a retired dry-goods merchant.

N the spring of the year 1870 who was then conducting an extensive a young architectural clay- and lucrative practice. To this archiworker, who had recently tect Mr. Spring explained the object landed, was walking up of his presence at that place, and re-Broadway with a venerable quested him to give his professional and white-haired old gen- opinion concerning the probability of tleman, who at that time success attending any attempt to introwas well known and re- duce architectural terra cotta work into spected in New York. They were en- New York and its vicinity. The reply

"My dear sir, there can be but one ings on that thoroughfare. The old opinion upon that subject. It would most surely fail. Terra cotta has been tried over and over again, and every While standing on the east side of attempt has resulted in loss and vexathe street, looking up at old Trinity tion to all parties concerned. We Church, Marcus Spring was recognized know all about that material; it is by an influential and popular architect, useful enough in Europe, but it will

not withstand the rigors of our Ameri- the graveyard, he said, "that looks to can climate. If that young manintends me like a brick building, and if brick to continue his trade of terra cotta will withstand the climate of New York making I would strongly advise him to terra cotta most certainly will, because return to England, for he will find it I hold that terra cotta is only a higher impossible to earn a living for his grade of brick-work." The true signifamily at that trade in the United ficance of the value of the Trinity



New Britain, Conn.

RUSSELL & ERWIN BUILDING. McKim, Mead & White, Architects.

material."

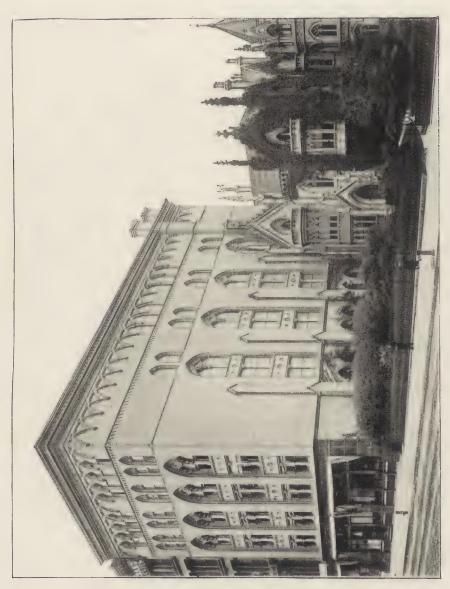
States. Our architects and builders Building in helping to demonstrate the will most certainly refuse to make permanent utility of terra cotta was not any further experiments with the then apparent, for the grotesque animal heads which form the keystones to the This emphatic opinion, from one window arches, and the modillions who had apparently given the subject which decorate the main cornice of the consideration, was very discouraging building are actually made of terra to Marcus Spring. But it did not so cotta, the material being hidden under impress the clay-worker, for looking a coat of paint, which had been used over at the Trinity Building, north of to make the terra cotta resemble brown



Wall street, New York City.

ASTOR BUILDING,

H. J. Hardenbergh, Architect.



WAREHOUSE ADJOINING GRACE CHURCH PARSONAGE.

Renwick, Aspinwall & Russell, Architects.

Broadway, New York City.

did not know of it or he might have recotta work used in this building is still perfect, although it has been found disintegrated faces of the brown stone work in the walls and mouldings.

Here let us define the difference between "terra cotta" and "architect-

ural terra cotta.'

"Terra cotta" is simply "baked earth," a term technically distinct from porcelain; it may be lacquered, painted or decorated in any color to represent various materials. But "architectural terra cotta" presents itself in the natural color which it receives from its constituent ingredients during the process of being burned into an imperishable material. It does not represent any other material, it is not an imitation of stone or iron or wood (although attempts are often made to make it such), it is a recognized building material having its own quality and purpose, and when used ought to be distinctly recognizable. Therefore, although Richard Upjohn did use terra cotta in the construction of Trinity Building in the year 1853, he did not architectural terra cotta. He simply used a material of burned clay painted to make an imitation of brown stone.

A very earnest contemporary of cotta work into New York, and one of his most successful efforts still remains in the window trimmings of the St. Dennis Hotel, located on Broadway, opposite Grace Church. No architect The architectural firm of Renwick, estate owners and builders to a belief

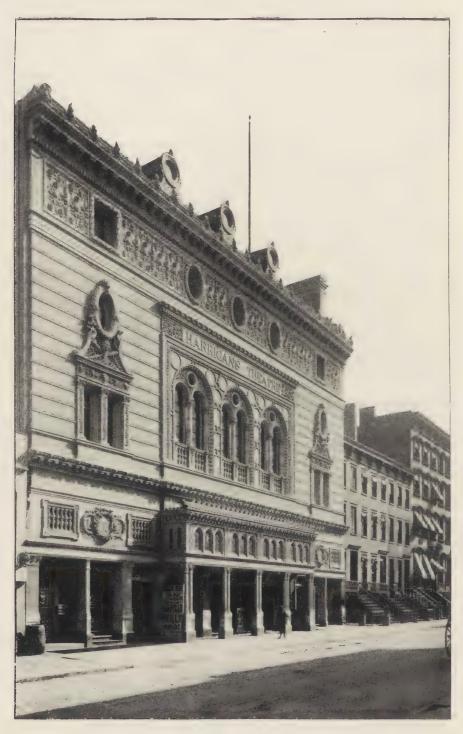
This very building, therefore, Aspinwall & Russell have designed was one of the few successful attempts, very many special uses for this mabut our friend, the advising architect, terial. One especially good example of decorative terra cotta work is the altar considered his opinion. The terra and reredos of St. Mark's Church, at the southwest corner of Avenue B and Tenth street, New York. This was necessary to recut the damaged and made in Boston about 1882. It is designed in early English Gothic and is exceedingly well executed in both modeling and color. Another design by Mr. Renwick that called for especial care in construction and detail is the Church of All Saints, recently erected on the northeast corner of Madison avenue and One Hundred and Twentyninth street, New York. The traceried rose and mullioned windows, the pinnacles and gables, have all been made of gray terra cotta.

In 1870 the New York architects and builders certainly were not ready for the reception or use of architectural terra cotta, and therefore no organized effort was made at that time to manufacture it in this vicinity; yet old clayworkers, such as John Stewart, of West Eighteenth street, Henry Maurer, of East Twenty-third street, New York, and C. W. Boynton, of Woodbridge, N. J., can very well remember that the subject was submitted to them at that time, and that they agreed with the architect who said it would not do to

make any new attempts.

The first American city to welcome architectural terra cotta work was The Western metropolis Chicago. Richard Upjohn in that early effort to teems with men who, like the Athenians produce terra cotta was Mr. James of old, are ever on the lookout for some Renwick, who is still an earnest worker new thing. The cost of stone, the and a believer in the value of archi-rusting of iron and the danger of tectural terra cotta. No one did more wooden structures to city property led than Mr. Renwick to introduce terra them to cheerfully welcome a material that would conjoin with their vast brick-making industries, and give them a decorative and useful building material.

W. Boyington, John Van Oxdell, recognized the higher claims of archi- Burling & Adler (now Adler & Sullitectural terra cotta more thoroughly van), Carter, Drake & White, W. L. B. than he did. It is an interesting fact Jenney, and Burnham & Root, were the that Mr. Renwick has been personally pioneer architects who first recognized identified with all the progressive his- the utility and advantages of architecttory of terra cotta work in New York ural terra cotta. The great fire at City from 1853 up to the present time. Chicago in 1871 converted the real



New York City.

HARRIGAN'S THEATRE. F. H. Kimball, Architect. (See page 145.)



Union square, New York City.

LINCOLN BUILDING. (See page 148.)

R. H. Robertson, Architect.

extensively in the rebuilding of the invested in the business, and is produccity, so that the manufacture grew in ing upwards of eight hundred thousand demand rapidly. Especially was this dollars worth of building material per true of the trade in the outlying West- annum. Boston, Baltimore and Philaern cities, as Des Moines, Omaha, Mil- delphia also have extensive works enwaukee and others-for its light cost gaged in the same industry, and there for freight and the scarcity of skilled are many small concerns in various

labor rendered it desirable.

New York; Whitney Lewis, of Boston; H. H. Richardson; and Messrs. Stone & Carpenter, of Providence, began to use the material. Messrs. Stone & industry was made by Silliman & Farns-Carpenter used it for the Brown Uni- worth when they introduced it (in the versity and the City Hall in Providence, R. I. H. H. Richardson used it upon in connection with moulded red and Trinity Church, Boston. Whitney Lewis used it upon a large residence on Commonwealth avenue, Boston. G. B. Post used it upon a residence on West Thirty-sixth street, New York. These formed the Eastern foundation upon which the vast architectural terra cotta industry of America has been organized and developed.

To Geo. B. Post belongs the honor of having erected the first strictly architectural terra cotta building in the City of New York. This is located on the north side of West Thirty-sixth street, near Madison avenue. It was built by Jas. B. Smith in 1877, and is a good evidence of the weather qualities of terra cotta, all of its detail being as perfect to-day as when it was set up fourteen years ago. The ornamentation of this work is worth especial notice, for we believe it to be the only example in New York City of that description of work. It was not modeled as clay ornamental work is generally done, viz., in a plastic condition, but the slabs were formed solid, and when partially dry the designs were carved with wood-carving tools, no hammers being used. Isaac Scott, of Chicago, was the originator of this method of producing ornamentation, and it met with great favor among the Chicago architects. The terra cotta for this building was made in Chicago by the man who in 1870 had been advised not to attempt to induce New York architects to use the material. New York now has two large establishments employing more than six hundred men. It has more this industry.

in its usefulness, and they used it very than half a million of dollars of capital places spread all over the United States. In 1887 Architects Geo. B. Post, of All these are the direct outgrowth of the Chicago Terra Cotta Works, which are still in prosperous operation.

> The next step in the progress of this erection of a large commercial building) black brick-work; this was done in the Morse Building, at the corner of Nassau and Beekman streets, erected in 1879. In this building the raised or protected vertical joint was first used. This form of joint prevents the rain from scouring out the pointing mortar, and it is an important and necessary precaution which ought to be used upon

all exposed surfaces.

When once the architects of New York began to recognize the use of architectural terra cotta they caused a vast amount of development in the production of it. Having no precedent, they made all kinds of demands, such as had not hithertofore been required or expected; but these very requirements have tended to lead the makers into new channels, which have produced successful results in regard to color, ornamentation, construction and surface treatment, so that now there is no reasonable doubt that architectural terra cotta as it is designed and made and used in America is far better in many respects than the best products of European factories.

The Brooklyn Historical Society's Building was designed by Geo. B. Post in 1878, and it was the first important or public building in which the material was used by a New York architect. This was followed by the Produce Exchange Building, the Cotton Exchange Building, and many others by the same architect, to whom the clay-worker owes a large measure of thanks for his practical assistance in the development of

work in Wisedell about 1880, when they designed however, demanded other colors. Geo. the New York Casino, Thirty-ninth B. Post asked for red, Whitney Lewis street and Broadway. In this speci- called for yellow buff, while Messrs. men, which is of Moorish design, it was Stone & Carpenter wanted brown. shown that terra cotta was capable of Thus the old fashion passed away and elaborate decoration at moderate cost. This capability has been constantly ball in the various buildings which agreeable and varied, and almost buildings. unattainable in any other material. The Montauk Club House furnished the proper use of architectural terra use of terra cotta furnishes the designer. The name of the club gave an Indian significance to the design which the architect made use of, and the result is an ensemble of Indian trophies and implements utilized in decorative features that are both pleasing and suggestive, while the sculptured friezes enabled the architect to record in a durable material many incidents of Indian life and customs which makes this structure an object of interest to the general public. The façade of the new Harrigan's Theatre was treated in the same spirit, and subjects connected with the Harrigan's successes were used as motifs for the decoration. For this purpose there is no other material so useful to the architect, because it permits of the original sketch models being burned and used (a process which prevents the defacement and mutilation incident to remodeling and casting).

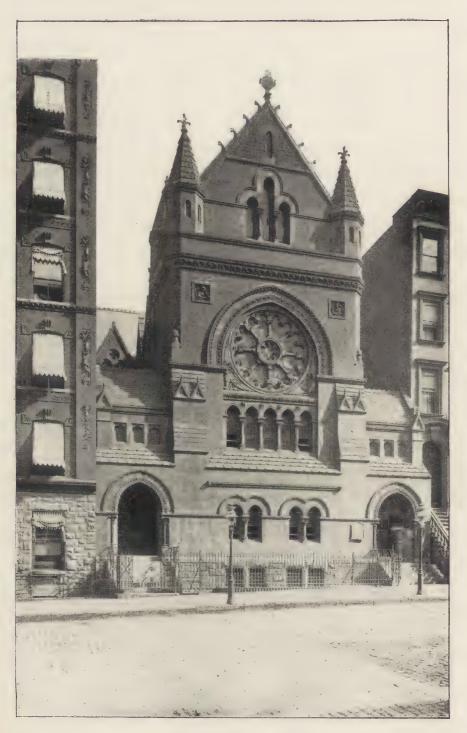
by, and it received its present import- that it is done in plastic material ance from, Eastern architects. Previous and therefore indicates terra cotta to 1877 almost all American architect- work. ural terra cotta was of a stone color,

The introduction of highly or- Joliet limestone being the Chicago ideal, terra cotta grayish buff was the prevailing color of was begun by F. H. Kimball and Thos. Chicago terra cotta. Eastern architects, the polychrome prevailed, and is now the present demand. This has done put before the public by F. H. Kim- very much towards increasing the demand for architectural terra cotta, and he has designed, viz., the Catholic Architects McKim, Mead & White Apostolic Church on West Fifty-seventh were perhaps the foremost leaders in street, which has an elaborate rose this branch of the business; certain it window, in which several features were is that to them belongs the credit for introduced that had not before been the introduction of the Pompeian or attempted in America. The Corbin mottled color which they used on the Building at the corner of John street Tiffany House, also a neutral reddish and Broadway is another example color used for the Russell & Erwin of profuse decoration of surfaces, Building (New Britain, Conn.), and the which, together with the color of the white used upon the Hotel Imperial, terra cotta, produces effects at once the Madison Square Garden and other

One of the most serious problems in

still another opportunity for taking cotta was the treatment of its surfaces, advantage of the facility which the and this quality has been most successfully developed by Architect Cyrus L. The bold and massive W. Eidlitz. character of his style (Romanesque) forbids the use of the usual old-fashioned smooth surface. Therefore he made a study of the subject, and the result of his efforts was the introduction of the combed or crinkled surfaces, by a method which he personally devised, and which method is now the common property of all clay-workers. It has helped greatly to improve the artistic value and appearance of terra cotta work. This surface treatment was used upon the Art and Library Building (see Archi-TECTURAL RECORD, Vol. I., No. 2, p. 167) in Buffalo which is made of red terra cotta; also upon the Telephone Building in New York which is of a warm reddish buff, and upon the Racquet Club-house which is of dark or socalled Pompeian color. In all of them the advantage of the surface treat-The subject of "color" in terra cotta ment is apparent. It is a truly diswas first brought under consideration tinctive feature, which shows clearly

Thus have the architects of New



CATHOLIC APOSTOLIC CHURCH.



RESIDENCE ON WEST 36TH STREET.

Near Madison avenue, New York City. (See page 144.)

Geo. B. Post, Architect.

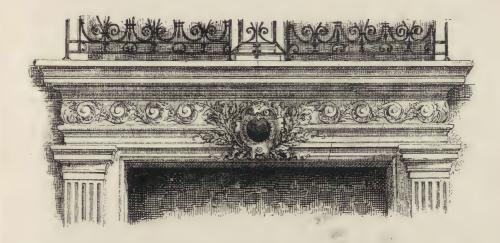
York urged on the terra cotta makers, compelling them to new efforts, and in successful, so that by the coöperation of the architects and the clay-workers architectural terra cotta in America is probably in many respects in the van in comparison with older countries.

It would be impossible to mention all the architects who have made this progress and development possible, and we must be content to specify a very limited list of buildings that are especicotta makers as suggestive of various matters of detail which may prove profitable to them if examined in an intect; the De Vinne Press Building, cor- good work already done.

ner of Fourth street and Lafayette place —Babb, Cook & Willard, architects; the many instances these efforts have been Church of the Messiah, Brooklyn; the Railroad Men's Reading Rooms, Madison avenue and Forty-fifth street; the Lincoln and other office buildings on Broadway, between Fourteenth street and Eighteenth street—R. H. Robertson, architect; the Carnegie or New York Music Hall, corner Fifty-eighth street and Seventh avenue-W. B. Tuthill, architect; the Colonial Club House, 72d street and Boulevard; the West End ally instructive to the architectural terra Presbyterian Church, One Hundred and Fifth street and Amsterdam avenue— Henry Kilburn architect; the Collegiate Church, corner Seventy-seventh street and West End avenue quiring mood, with a view to the imstreet and West End avenue—provement of their processes of produc- R. W. Gibson, architect. Upon this tion. Such lessons may be learned by spirit of coöperation depends the future a study of the Astor Building, Wall development of this industry, and doubtstreet; the Western Union Building, less it will lead to greater advancement Broad street; the Schermerhorn Build- in the future than that it has produced ing, corner Great Jones street and La- hitherto, because the improvements fayette place—H. J. Hardenberg, archi- hoped for are to be based upon so much

Fames Taylor.





VARIOUS CAUSES FOR BAD ARCHITECTURE.



looking where the build- amend.

commonplace and tasteless enough in the beginning, have fallen tectural development is one, of course, into some one of the various stages of ruin that only invite the coming of fire, or the hand of the dealer in second- Christendom, except some of our exhahand building material.

Neither can it be said that the condisuch as to compel unqualified commend- social conditions they have risen gradumade manufactures. streets look like unhelmeted battalions the humble origin of such structural drawn up in line of battle. Many of delibly on every story. but it is sometimes thought that they protect the inmates and their goods are too much like an exhibition of pictures all by the hand of one master. They were not always built with-

HE general effect of thing imperfect or incomplete architectall buildings in no urally, and it will be interesting and city of the world is possibly useful to study some of the satisfactory. Every reasons for the defects. If it be found city has its squalid that there are sometimes defects too dilapidated radical to be removed, we may still look quarters, to discover errors that education can

The first obstacle to perfect archiwhich can never be removed either by time or training. All the cities of lations of the night in this country, and in some colonial countries, are the tion of any of the most celebrated growth of many years, generally the streets in the world is architecturally growth of many centuries, and in their There may be streets in Paris ally from poverty to the different dethat display nothing glaringly defect- grees of opulence now displayed. They ive; but the city, it will be remem- are advancing, also, with greater or less bered, was rebuilt by political machin- rapidity according to their environery during the reign of the last Napo- ment and opportunities, in civilization leon, and, like everything else done by and the desire for comforts and luxumachinery, it lacks the variety of hand-ries. But their buildings were largely The Mansard the product of a period when poverty roof has been used in Paris until the only was the common inheritance; and of men, all with retreating foreheads, objects as they display is stamped inthe streets of Paris are beautiful; object in their construction was to Everywhere in the world there is some- out any decorative motive. Occa-



TENTH STREET HOUSE.
(See "History of Terra Cotta.")

sionally we see attempts at archi- necessarily full of his rent roll, and he improvement. a perpetuation of like causes producing the building; and by the time health like effects.

obstinate obstruction but it is very ments which alone he is free to forget. serious in its effects on the architectpart of the structural work in all cities architecturally commonplace. thetic motive An alternative might be improvement is yet visible. commonplace.

There is also another obstacle in the buildings built for tenancy. The land- their profits. lord proposing to build examines the

tectural decoration in the measure of must see that everything redundant is those old-time rookeries; but the re- shorn away. Certain structural requiresults in such cases suggest the freak of ments must be observed, for the law some house carpenter or mason whose interposes here, and decrees if it does architectural instincts were irrepressi- not always obtain immunity from danble. The buildings as they stand were ger for the tenant. The building must simply a product of domestic needs of be constructed, too, with an eye to sanithe commonest kind. But here is the tary requirements. There must be good obstacle that still stands in the way of ventilation, often to be obtained only Society is becoming at the sacrifice of considerable space, more opulent and more highly civilized; and the plumbing must be well done, but the relative condition of its mem- All this is regulated by law so far as bers has not radically changed, and, the law can regulate the hidden and though we may reconstruct whole dis- inscrutible, and if there be any irregutricts as fast as ruin compels their re- larity in complying with legal proviconstruction, poverty has not yet been sions the gain is not likely to accrue to completely eliminated from the archi- the landlord. He must meet the legal tectural problem. We may look to see requirements by putting the cost upon and safety have been considered there This obstacle in the way of good may be only a slight margin left for architecture is not only a peculiarly administering to those æsthetic senti-

Many difficulties beset the construcural improvements of our cities. The tion of tenement quarters which do not day can never come when men of mod- appear on superficial observation, and erate means will not be found construct- which must continue to make those ing their own shelter, and the chief quarters the representatives of the must continue to be done with no æs- agency in active operation for their temporarily found in the new national- now and then we hear of some philanism of the cranks; but it is an alternative thropically-disposed persons, or associthat will not be worth considering. We ation of persons, who have determined must expect to see in the future, as men to build model tenement houses where have seen in the past, all our buildings quarters may be obtained at the miniwith any pretension to æsthetic merit mum of cost, and everything shall be concentrated in opulent quarters, while luxurious and perfect. But the experithe larger parts of our cities remain ments usually end with the first attempt. There are two chief causes for their want of success. First, the numway of tasteful architecture which fol- ber of philanthropically-disposed men lows upon the first obstacle as a carol- in the world is not relatively large, lary. Or, rather, it is the same ob- and, secondly, the number of persons stacle differently manifested, or inter- who are willing to live on the charities posed in a different form. If men of of the philanthropically disposed is moderate means cannot build very ex- relatively still smaller. We cannot dipensively when they build for them- vest model tenement houses, built withselves neither can the rich build ex- out any eye to profit, of their eleemospensively when they build for the use synary character, and no high spirited of men of moderate means or for the man, whether rich or poor, will care to poor. The ability of the tenant to pay publish to the world that he is saving rent must regulate the standard of all money by asking other men to forego

These are the chief obstacles to be plans of the architect with his head seen in the way of model tenement



Brooklyn, N. Y.

LONG ISLAND HISTORICAL SOCIETY. Geo. B. Post, Architect. (See page 144.)

houses when the subject is considered chievously in our mercantile districts. morally and economically. But even In both districts it is the desire for low could such dwelling places be made rents which compels æstheticism to popular their success would not improve the character of our tenement-comes to the front. But there is this house districts æsthetically—the main difference between the two districts. consideration here. It would rather In the mercantile districts there is injure it, indeed, for even the philan- wealth with the ability to pay high thropist who had determined to furnish rents, and the desirability of elegant quarters for the poor at, say, 2 per cent warerooms and office rooms is so great interest, would not object to making that landlords may find a profit in it 3 per cent if he could obtain the ad-liberal expenditure. But the temptavance by pruning away some of the tion that leads to shamming is also architectural decorations of his build- great; and the inducement of cheap ing. He would justify himself by the material throws a powerful obstruction reflection that with the additional i in the way of the architect who would per cent he could build more model build conscientiously if he was only tenement houses. The rapacious land-furnished the means. lord on the other hand will be forced This mention of material suggests a to be a little tasteful for the purpose broad field for discussion. Next in of making the quarters offered for rent order after the already-mentioned two inviting. He will lay tiled floors in the causes for tasteless architecture, or the corridors, erect marbled mantels, and one cause operating differently in difotherwise try to beautify his premises. ferent districts, comes the use of bad But the model tenement-house land- building material. There are four lord can afford to disregard all such chief vehicles for the expression of meretricious embellishments.

ance, and, without any intention of stances. making an Irish bull, it must be said Wood, probably the first material that that way will be found in abolish- used in buildings on account of the ing those districts altogether. When facility with which it could be the inhabitants of the tenement houses fashioned into structural forms, has have gained sufficient financial intel- always remained in common use ligence to prompt them to act col- either for entire buildings or for parts lectively, and, making use of insurance of buildings. In this country it has as a means of offering security, to be- always been the chief material used come stockholders in their own dwell- for the construction of entire buildings. ings, a newly-awakened sense of pride This statement might not be thought and responsibility will lead them to quite true by persons visiting only expend money in the decoration of the within the fire limits of our large cities; homes which may be also the homes of but if we go abroad through the their children. But until that time country districts or visit the suburbs or comes it is probable that the rapacious outlying wards of the cities we shall landlord will be about the best phi- find the vastly larger number of dwelllanthropist, and, architecturally, the ings, and even of factories and mercanhighly-cultivated gentleman, tile buildings, built of wood. most whom we shall meet.

trol the tenement-house districts in the ities where stony fields almost compel production of the commonplace in the farmer to pile up the material architecture, come the precisely corre- at hand in the form of a dwelling. sponding influences that work mis- Wood has been so largely the

architectural ideas, stone, brick, wood, There is probably but one way and iron; and it is in every way depracticable in this country, or desirable sirable, vitally necessary, indeed, if we in any country, through which the ten- wish to build well, that we learn to ement-house districts can be made to distinguish the different degrees of wear an improved architectural appear- merit to be found in these various sub-

A farm house built of any other material than Next, after the influences which con- wood is the exception save in local-



New York City.

ENTRANCE TO CASINO. (See page 145.)

F. H. Kimball, Architect.



Nassau street, New York City.

ENTRANCE TO MORSE BUILDING.
(See page 144.) James M. Farnsworth, Architect.

States that it has modified our archi- light and brittle, and that the load tectural ideas both structurally and sustained, as represented in the æsthetically. It would be better to entablature or pediment, is quite say that it has prevented the develop- inconsiderable. and it will properly be the first ma- only made a too literal copy, or imita-

stances used in architecture.

merit whatever. The architect cannot and grandeur. ever attempt to give expression to his the assumption of absurdity. error is radical. Those massive col- make a very attractive dwelling. umns in wood are too suggestive of But what shall be said of wood as a sections of the mast of some tall ship material for interiors? Here we stand to be in keeping with the architectural upon new ground, for the interiors of style of a people who build of stone or buildings differ largely from exteriors marble. They look ponderable and in the laws that should govern their strong, able to sustain the shelf of a treatment. Decorative art assumes

material in the United mountain. Yet we know that they are The modern builder ment of our architectural sensibilities; is guilty of a double offense. He not terial to consider when discussing the tion, of the style, but he caricatured question of merit in the different sub- the material. His work is suggestive of neither the firmness, durability, nor It may be said in the beginning that richness of his model, and those are for the expression of the higher properties that enter very subtly into language of architecture wood has no our conceptions of architectural beauty

Wood, as a material for exteriors in sentiment of grandeur in wood without building, is suitable only for the exbecoming in a measure, and in a pretty pression of lightness, an exceedingly large measure, too, ridiculous. This is questionable architectural quality at said in the full knowledge that in best. It is easily fashioned into archicountry towns, and sometimes in our tectural forms, but to be consistent they large cities also, one may often see must be forms that avoid rather than Doric, Ionic, and Corinthian porticos, follow any architectural style. None and even whole façades, done in wood. but a lunatic would undertake to build The Greek proportions are observed; a Gothic building in wood, though it and the Corinthian columns are fluted would not do to say that the task has in strict accordance with the most apnot been attempted. The same reflecproved features of the art. But it can-tion might be made with reference to not be said that the display discredits its adaptability for the Romanesque. Such The Greek style with its horizontal linarchitectural exhibitions are usually tels is more flexible; and custom, as we survivals of a past generation. To have seen, has sanctioned its use for confess the truth, however, they are imitations of this style. Wood is really much more dignified than the erratic a suitable material only for buildings Queen Anne cottages that have more that make no architectural pretensions recently sprung up in their neighbor- whatever, and that may be said to be hood. Were one authorized to appor- conglomerated by the house carpenter tion the houses of the town among the for the purpose of giving protection inhabitants for places of residence we against the inclemency of the seasons. would feel inclined to give the dwelling It may be conceded that a certain with the Greek portico, or façade, to measure of elegance has been attained the county judge and his accomplished in the construction of wood buildings; family of grown-up sons and daugh- but it is an elegance hardly up to the ters, and one of the Queen Anne standard of architectural æstheticism. cottages to the veterinary surgeon. The best wood building ever con-This would appear to be the structed will look better still when its most appropriate disposition that porches, doorways, windows, and clapcould be made of two dwellings both boards are covered all over with trailwrong, but the one erring rather in ing vines, and it is made to retire material and the lack of original feeling behind the veil of a nearly impenethan in principle. Nevertheless, the trable green. Thus decorated it may

tals of a house and enter the rooms and almost up to the level of bas reliefs in corridors. We cannot, it is true, escape marble or marble statues. But he is the law of mathematical proportion a factor in the building art no longer. wherever we go. A square room, not- In place of his work we have now merely it is seen, is less agreeable to the eye standard of even the best decorative than a room prolonged half the dimensions of the square into a rectangular floor is peculiarly offensive, though such citement to bad architecture. proportions are often seen in small measured in accordance with matheproper relations to their environment, and interior mouldings, or columns, should be as accurately in proportion as any object of exterior decoration. But the combinations to be taken in at a single coup d'æil in any interiors are much less complex than the combinations of exteriors, and proportion, therefore, is less likely to be considered than decorative effect. From the decorative point of view, then, is wood as good a material for interior finish as stone or marble? Is it even as good as marbled slate, or artificially colored marble?

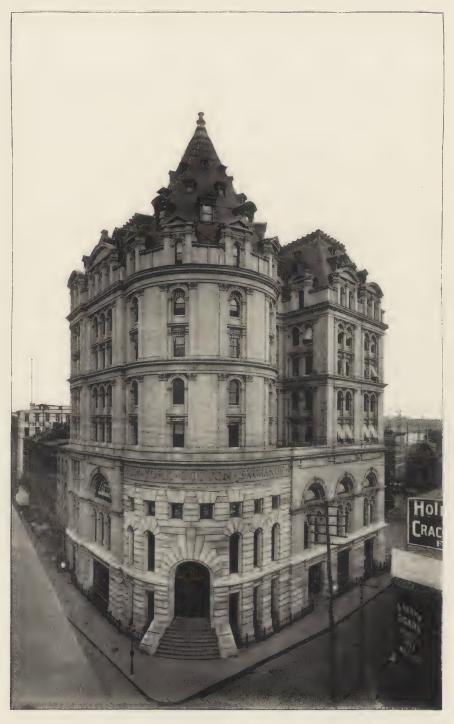
There is no doubt about the adaptability of wood for the production of decorative effects. The natural grain moulded into shapes that are pleasing to the eye. But just in this facility is the first objection. It is somewhat like terra cotta, too easily moulded, and hence the moulding machine in place of the carver, and stiff, inflexible forms where everything should be wrought out lovingly by hand. Even the woodfront rank. He was even more than a mere decorative artist, and had it not been for the perishable nature of the material in which he wrought we might have galleries of his productions still days when wood was the standard bility of carrying certain decorative

greater importance as we pass the por- building material in Europe, a variety withstanding the frequency with which stereotyped forms never quite up to the art, and rooms are finished by the architect as they are furnished by the upform. A square room having walls just holsterer after patterns that may serve equal in height to the dimensions of the half the country. This surely is an in-

Again, interior decorations of wood rooms. A room with a ceiling too low are not suggestive of durability. They for the dimensions of the floor, when lack the solidity in appearance that measured in accordance with mathe- marble displays. "Only for to-day" is matical ratios, is still more disagreeable the legend borne upon all wood to the eye. Stairs, too, must hold their mouldings, mantels, or what not of decorative art, and herein they are suggestive rather of fashion than of architectural style. This may not be an objection when we reflect that all really fine art is something to be preserved. It is certain that the legend is true, because we are moving continually in the direction of a higher expenditure in architectural construction, and most of the work that is called fine to-day will be replaced within a period to be measured by the lives of persons now living. It cannot be said, thereas some of the substitute materials such fore, that the perishable nature of wood as a material for interior decoration should weigh very heavily against its use. Its sins are of another complexion.

Finally, wood interiors are objecof some wood is exquisitely beautiful, tionable because they lead to the and the material is easily cut and excess of decoration. Of all the arts architecture should be the most chaste. More than any other art it creates an environment which casts upon our daily lives the reflex of its own character. If it is florid, redundant, superficial, coarse, or sensuous in its decorative suggestions it is a disparaging measure of our civilization, a mircarver was once an artist almost in the ror in which we may see ourselves as others see us and find the reflection not flattering. Architecture should display taste in every line, and interiors should be objects of special study.

But while speaking of the excess of extant instead of the few examples that decoration it will be well to define the are preserved in museums. His work character of the decoration that is to be could show an infinite variety in the condemned. Cost precludes the possi-



New York City.

COTTON EXCHANGE.
(See page 144.)

Geo. B. Post, Architect.

forms to excess and against this style of decoration, even were there any copy all the vices of wood building is danger of its misuse, it would not be ever present with the workmen in iron, necessary to file a caveat. Panels executed by accomplished artists may not be strictly decorative productions; yet as they do service in a wall, and bear a relation to general effect and proportion, they have an architectural of wood might be safely reduced onesignificance. The same may be said of half or two-thirds when constructed of purpose co-operative with architecture. omically a gain to the landlord. Cortions that will live when wood interior with reference to every part of a buildhave crumbled and gone. But their ing. The great tensile strength of iron coming is delayed by the inflammable enables the builder to reserve mere figmaterial with which we are covering ments of wall faces between his aperour walls. Our buildings are made so tures. It may be said, indeed, to have unsafe that it entails the risk of heavy almost demolished the wall as an loss when we undertake to decorate architectural feature in a majority of too expensively.

Were it only a question of the use of iron needed for the tallest façades. of wood beams, and the like, very little genius of the designer of stone post-but good could be said, though we erns must have presided at their conshould be forced to deplore the fact ception and wrought industriously in that it is such an excellent conductor their execution. Indeed, to such an of heat. Restricted in its use, too, and excess is this reduction in material urally desirable. down when the winds blow. Iron may designed in ancient structures, has thus far mainly structural; and as this and glass doors. article deals rather with the æsthetic asked differently. the question in language sufficiently design, conceived in a spirit on a level explicit, for if there was ever a build- with only the lowest of decorative art. ing constructed in all its parts of iron Were our iron builders to study utility and he will hardly be expected to com- be greatly the gainer. It would no mend what he has not seen.

In the first place the temptation to with a further temptation, on account of the greater strength of the material, to magnify those vices. A post that needs to be four or six inches in diameter to sustain its load when constructed works of sculpture executed for any iron, and the reduction would be econ-These are the kind of interior decora- responding reflections might be made the examples to be observed along our But, now, what shall be said with ref- urban thoroughfares, mere columns erence to iron as a building material? and pilasters offering all the support as a subsidiary material to take the place such columns and pilasters! The good tastefully moulded, it is not altogether carried that men who profess to build to be condemned for window and door of iron, or to build iron fronts, are posts where the close grouping of win-building mainly of glass and using the dows and doors is thought architect- iron as a foil to cover their deception: Then, again, the The iron parts of the building are tornado exposed sections of the West merely an ugly frame work to hold should be able to find in iron somethe windows and glass doors in place. thing that can be anchored and held The wall, so elaborately and lovingly have its uses, certainly, and they are disappeared, and in its place we have But its conceded merits are façades composed chiefly of windows

Now this might be an advantage to than with the mechanical or engineer- architecture were we building coning side of architecture the question at servatories; but as we are building the head of the paragraph must be nothing of the sort for mercantile What shall be said uses our iron fronts are constructed in with reference to the æsthetic utility of contempt of architecture. As already iron as a building material? Put in suggested even the little of iron that these terms it will be possible to discuss they contain is hopelessly tasteless in that was æsthetically good it was not only, and leave out their imitations of brought to the attention of the writer, architectural decorations true art would longer be caricatured, and the mis-



Lafayette place, New York City.

DE VINNE PRESS BUILDING.
(See page 148.) Babb, Cook & Willard, Architects.



chievous influences of caricatures on give it an advantage after the lumber popular taste would be withdrawn.

building material for anything more thought pretty in cottage architecture. than structural use in places where it architect for iron buildings wood must be abandoned. has not yet come. It may be that only we know for certainty. the house painter and gilder after this cadence. conception, we may have some idea imitated. But may not iron, after all, have something higher than a merely structural place in the building of the causes that are purely æsthetic. future? It will not be worth while to strictly æsthetic building of the future, because the question has been answered negatively in the context.

iron could be made an available build- this interference; and it is probable ing material for cottages of the class that the architects who build for the that are now built of wood, and were it market on plans made in advance are not for the greater cost we should long the only men who are quite free to folsince have seen it largely made a sub- low their own tastes and suggestions. stitute for wood in this kind of con- It will hardly be worth while to say struction. when the cost will be more nearly architect must have studied his profesequalized, and then, in the language of sion to very little purpose if he does the athlete iron may have its inning. not know better than any layman the The processess of its manufacture are best use that can be made of the much cheaper than the processes for resources at hand. Exceptional cases manufacturing wood, and this would may be found in the construction of

forests have disappeared. It is more What has been said may sound like a flexible than wood, too, for moulding complete condemnation of iron as a into those decorative forms which are

But, this is a speculation in futures is entirely hidden from view. But it is which is hardly fair dealing. Before not intended that the condemnation iron can enter the field as a comshall be so sweeping. It may be that petitor for cottage building contracts, like the architect for wood buildings, use of iron as a material for exhe can never come and bring a head teriors in building or for visible infull of very grand ideas. Iron is teriors has had a mischievous influequally with wood unsuitable for the ence on the architectural developexpression of the highest æsthetic ment of the period. We even observe sentiment, and this stricture must re- a disposition among architects who main valid even when it is fashioned make plans for brick and stone structinto a mere imitation of the forms of ures to give more space to apertures brick and stone. Conceive of the and less to wall face than was thought Equitable Life Insurance Building either tasteful or prudent a few years transformed in its interior from its ago, and this practice does not reprecostly colored marbles and polished sent an architectural advantage. It is stone into an iron finish decorated by a sign rather of corruption and de-

We find, then, in want of resources of the hopeless inferiority of iron as a and the use of bad material the first material suitable for the representation two causes for bad architecture. They of the beautiful. But it is idle to make should be sufficient without any suppleany conjectures on the possibilities of mentary influences to account for the iron when an attempt is made to fashion greater part of the unsatisfactory buildit in imitation of brick and stone. No ing that we see whenever we walk conscientious architect would make the along the streets for a distance, even attempt, and were it made only the no greater than the length of a block. coarser forms of the models could be But there are other causes, some of which are also moral and structural, and then, again, there are still other

A common cause for architectural ask if it can have a higher place in the failures, greatly deplored by architects, is the interference with their plans on the part of building landlords. Much that is unsightly in design and defective There can be little question but that in arrangement is directly charged to But the day may come that it is a very foolish practice. An

buildings, where special needs which times each day, and the eye cannot no architect could be expected to thorhelp but rest on his ugly structures. oughly comprehend must be met. But idea when it is offered gratuitously.

defective building material, or divided take charge of his work. counsels. There are a great many bad beyond the ideal a slight detour when wish to escape the opportunity to set up. As to the bad tions to really æsthetic production. poet we need not read his works, and along highways which we may be forced structed and incompetent.

factories, and sometimes of mercantile to pass daily, and sometimes several

Again, there are many architects a building landlord who would inter- who are not altogether bad, but who fere with an architect for the purpose lack comprehension and comprehensive of securing greater convenience in his training in their profession. The archidwelling, or for any modification of its tects who conceive decorative art to be architectural appearance, shows more the chief end of architecture are legion, self-confidence than good judgment, and no amount of money placed in the Yet it would probably be useless to hands of such men will ever secure good enter any protest against this practice building. The larger their resources, of interference. Architects are just as indeed, the worse will be their achieveplenty as employing landlords; and ments. An architect with the United were any one of the designated frater- States' Treasury at his back built the nity to set himself too vigorously New York Post-office. It is easy to against the intelligent dictation of his expend millions on work that will only patron he might be discharged for a help to make the decorative details a conceited coxcomb The alternative covering for architectural deformity. cognomen for conceited coxcomb might A thoroughly trained and meritorious be blockhead. The architect might be architect would do more for art with arraigned for a stupid fellow on account one hundred thousand dollars than a of his inability to appreciate a good bad architect would do with all the money that could be put in his posses-But not all the bad architecture is sion, unless, indeed, he had the good due either to the poverty of resources, sense to employ the good architect to

There are various causes, it will be architects just as there are bad painters, seen, for bad architecture; and not the bad sculptors, bad poets, and bad mu- least disagreeable of the reflections sugsicians; and it is our misfortune that gested by this fact is raised by the certhe bad architect has the power of tainty that men can never look to see placing his work so conspicuously it all banished from public view. Could before our vision that we cannot fail to we reconstruct Athens as it existed in observe it no matter how persistently the days of Pericles we should no doubt we try to close our eyes. To the studio find many very ugly structures to one of the bad painter we need not go, and Parthenon. The productions of men of the chances are that his work will not supereminent ability are the only works get into the houses of any of our that live in either material or history. friends if we keep good company. The But the very word supereminent means bad sculptor is somewhat more obtru- that the great mass of art producers are sive. He may even drive us from the gifted only with mediocrity. They are mall in Central Park if we seek to pass imitators and copyists rather than the Shakespeare at creators of fine combinations. Yet they the entrance. But he can compel have not even learned to use the rule we and compass with any true estimate of misshapen their comprehensive utility, and it folimages that he occasionally finds an lows that their works are not contribu-

The best that we can do is to increase the bad musician, passing us with a by careful training the number of the blare, is rarely heard again. But the supereminent, and to curtail as far as works of the bad architect are set up possible the operations of the unin-



43d street, New York City.

RACQUET CLUB. (See page 145.)



Detail from the Myth of Osiris, showing lotus.

THE GRAMMAR OF THE LOTUS."

AN ANSWER TO CRITICS.

I.



by the editor of THE ARCHITECTURAL REC-ORD to prepare for his readers a summary of my conclu-

sions regarding the origin of classic ornament as recently published in my "Grammar of the Lotus."* Its expense, size, and technical form of presentation all tend to make this work somewhat difficult of access to readers who are not professional archæologists. Moreover, since its publication, I have been complimented by an extraordinary number of reviews, largely of a favorable character as regards the main features of the work, but in certain cases taking issue on important points, which require consideration and answer.

These reviews have been of great service to me, as making me aware of

HAVE been requested those objections to my positions, which would naturally occur to non-specialists in general, and I have consequently undertaken to furnish in a series of papers a more popular presentation of my studies on the evolutions of the lotus, written out in such a way as to meet the objections which have been raised.

> There is a great deal to be learned about my work from a summary of the verdicts passed upon it, and as far as these are known to me I shall mention or quote from a number of the more important. I should say that the main thing to be gathered from this summary is that the facts presented were not previously very largely known to the gentlemen writing the reviews.

> The New York Independent and the London Saturday Review have passed a verdict of wholesale condemnation. According to the *Independent*, my work belongs to "a class of studies in art which are unchecked by scientific

^{*&}quot; The Grammar of the Lotus—A new History of Classic Ornament as a Development of Sun Worship." Sampson Low, London; Dodd, Mead & Co., New York. Price, \$15.

principles and reach visionary results." According to the Boston *Literary World* "every chapter bears witness to the careful scholarship and the judicial spirit of the author." According to the *Saturday Review*, I have advanced "a collection of theories of the most novel



Altar with the Lotus.

and amazing character that it has been our lot to encounter within a long time." According to Dr. E. B. Tylor, in the London Academy, "there is no question as to the solid value of his evidence on the development of ornamental design." According to the New York Independent, my knowledge of botany is at fault. "The sepals of the water-lilies of the Nile do not become reflexed and never did." According to the botanist employed to catalogue the ancient Egyptian specimens of the museum at Kew: "I have often seen the sepals of the white water-lily (Nymphæa Lotus) curl over when the flower is fading. . . . The blue waterlily (Nymphæa Cærulea) also curls in the same way." According to the New York Independent,* "one of the most unfortunate failures of Mr. Goodyear is his determination to make out the papyrus to be a lotus." According to Mr. Cecil Smith of the British Museum, in the London Graphic: "The papyrus, which has always been held up as the origin of much Egyptian ornament, is effectually disposed of." Dr. E. B Tylor, in the London Academy, also takes issue with my views on the papy-

rus. According to the New York Tribune: "Until it can be shown that rus. the papyrus has a history of its own, covering all the gradations between copying from nature and a stage of conventionalism about as far removed from nature as anything on earth can be, Mr. Goodyear's argument will stand unshaken." Mr. Cecil Smith in the London Graphic accepts in bulk my views on the origin of Greek ornament as "a very useful contribution to art and archæology," but deplores the fact that I "have been led astray into the trackless waste of symbolism;" whereas the New York Nation says: "The theory that the lotus was a sun-symbol and that it carried its symbolism into the art of many countries is well sustained in the argument of the book." The New York Independent says that "throughout his work Mr. Goodyear employs a principle, almost a formula of argument, which is extremely fallacious and in most cases misleading." The New York Evening Post says that "the reasoning is close and acute . . the 'Grammar of the Lotus' is a notable contribution to literature, written with a tenacious grasp of its



Head-dress with solar disk, supported by the flower.

subject, with keenness of observation and clearness of statement." Dr. Tylor, in the London *Academy*, says that "the author's imagination fairly flies away with him" in the matter relating to the associations of the lotus with the solar

^{*} Review written by Professor Paine of the Metropolitan Museum of Art.

and-dart moulding, but appears to hesi- dangerous heresy: "Perhaps the sacred tate about the Ionic capital. The New lotus of the Nile suggested also the that "the evolution of the Egyptian shaped and the pomegranate of ecclelotus into the Ionic volute is conclusiastical art resembles the ovary of the sively and ingeniously made out." The lotus as it is bursting." New York Independent says of "the Ionic capital hyphothesis:" "His whole elab- show that my critics are not entirely orate theory has absolutely nothing to agreed among themselves, and when derivation must, we think, be accepted." raise doubts about the rosette, but fifteen years all my main results will be Dr. Tylor appears to consider my accepted axioms of science. Meanthink, fully established his position." may have been developed out of it" America, including the Swastika, with race. folk-lore and myth."

The most serious charge of all has of barbaric or primitive man. been brought against me by the *Inde-* other words, I have asserted for conpendent. I have been accused of enter- ventional patterns what has been ing into a contention with the Bible on already proven for the letters of the direct testimony of the Scriptures." I which in their turn are derived from am not able at present to find any quo-pictures. A pattern is originally a re-

bird and solar deer. The New York tation among other reviews which will Tribune says on this special point that clear me from this afflicting charge. I "the testimony of the plates carries can only cite a passage in the Christian conviction with it." Dr. Tylor accepts Union which proves that a religious unconditionally my view of the egg- Weekly has been guilty of the same York Christian Union says of the egg- bells and pomegranates [of Solomon's and-dart moulding: "We confess that Temple]. Certain it is that the lotus we do not feel convinced," but remarks of conventional Egyptian art is bell-

I think the above quotations will rest upon;" and the Nation says: "The critics disagree I know of no refuge but the general public. The fact is that The Christian Union and the Nation my positions are all intact, that in matter on the rosette the most im- time let us see what can be done portant portion of the book: "The toward a popular presentation of the part of the book which strikes me as subject. It is not only archæologists best, is that which treats of the Egyp- or professional specialists whose intertian rosette." The Independent says ests are involved. The whole question of the voluted lotus on Cypriote is one for all who are interested in the pottery: "No amount of assertion subject of Evolution and in the Darwinthat the Cypriote plant is a lotus will ian Theory, and that is to say for most ever make it such," and the New York cultivated people of our day. I have *Critic* says: "In the archaic art of Cy-personally found in Professor Youmans prus and the Ægean Islands he has, we a most interested listener, and I believe that Anthropologists and students of In 1888 the *Critic* said of my theory of natural history, from a Darwinian the Ionic volute: "It cannot be acpoint of view, will find much to interest cepted at all." In 1892 the *Critic* said: them in the history of pattern orna-"The egg-and-dart moulding, the Ionic ment. My elementary proposition is capital, and the Greek anthemion that primitive man naturally makes a picture before he makes a pattern. (viz., the lotus). The Nation says of This proposition is supported by the my matter on the lotus in Ancient fact that the spirited drawings of America that "the argument proves too natural forms, on bone and ivory, of much." The Tribune says that "Mr. the Palæolithic Epoch, are the earliest Goodyear's remarks on lotus forms in designs known to the history of our According to my view, abstract the illustrations which he gives, will or conventional patterns are evoluhelp to remove some prevalent notions tions from pictures. My proposition is about the spontaneous generation of that abstract or geometric patterns are, as such, initially foreign to the habits the subject of pomegranate ornament. alphabet. These are now known to "This new doctrine conflicts with the have been derived from hieroglyphics

peated hieroglyphic, arrested at the pictorial or symbolic stage of picture writing and preceding in natural order the evolution of the

phonetic sign.

The importance of picture writing (which is really symbol writing) for primitive man is naturally overlooked by moderns who are not anthropologists; but it has been suggested by some evolutionists that writing by pictures even preceded the use of language as being a more natural means of primitive communication, and it is well known that the gestures which assist so much the speech of barbaric man, and which naturally would have preceded speech, are all pictorial in character.

II.

It is not unknown to persons of average culture that the Egyptian

water-lily was a flower plant great of and popularity vogue and in the land of the It is a popular error, however, which I have noticed also in the expressions of professed critics to suppose that the plant grows in the river itself.* It is, moreover, as far as Egypt is concerned, a plant almost unknown by sight to modern travelers, for it is now confined to pools in the Nile Delta, a portion of the country not much visited by tourists. In ancient times it must have been common throughout the country was undoubtedly artificially propagated as a food plant, for there

Egyptian Blue Lotus, from Nature, showing sepals curled over.



Egyptian Blue Lotus, from Nature, showing three sepal spikes.

^{*}See, for instance, mv critic of the "New York Independent," June 16, 1892.

known by the name of lotus, whose whom the lotus was not a symbol of seeds were used by the ancient Egyp- sun-worship and finally of divinity in

tians for making bread.

seums, in the painted pictures of Egyp- were conceived as rising from a lotus. tian tombs and on the sculptured walls The pictures of Horus rising from the of the temple ruins that the great lotus (apparently seated on it) are vogue of the flower becomes apparent, familiar to every Egyptologist. We and let it not be forgotten that all art know that the Egyptians conceived the in ancient Egypt was religious in use sun (and other heavenly bodies) to have and in significance. Among the been evolved from vaenamel amulets (or mystic charms) por or the watery eleplaced in the tombs the lotus makes a ment (a conception frequent appearance. On mummy which reminds one of cases it appears constantly. On the modern scientific thetomb ceilings of Thebes it is the ele- ories as to the origiment of many decorative patterns. In nally gaseous form of the temple of Denderah the wall sur- all matter). Plutarch face of every interior apartment is tells us that they paneled to the height of the waist painted Horus on the with patterns of the plant. Every col- water-lily to represent umn in the temple at Esneh is decor- this idea regarding ated in similar fashion. The Egyp- the birth of the sun tian capitals which represent the water- from moisture. lily flower and bud are familiar Brahmans have a simiillustrations.

The location of all the lotus orna- the symbolism of the ment above mentioned is sufficient lotus (see Blavatsky, proof of its religious meaning, but this meaning is also mentioned by many it is, moreover, the hieroglyphic texts and by several most noted religious Youthful Horus on the classic authors. Moreover, this meaning symbol of the Budd-

is familiar to Hindoo literature and of the sect to was so sacred that he avoided conversation on the subject. There is a The Lotus as mystic form or

habitation of the departed

is called Le Lotus. The most generally recognized meaning of the lotus symbol is creative power or "life," an idea associated with resurrection and consequently with the tomb, but there are no peoples known, to whom this plant was sacred, who were not sun-worshippers, and

French Theosoph-

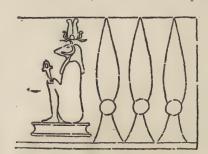
ist journal which

are two distinct water-lilies, both there are no such people known to general. Both the Hindoo god, Brah-It is in the Egyptian art of our mu- ma, and the Egyptian god, Horus,

> The lar theory regarding "Isis Unveiled"), and hists.



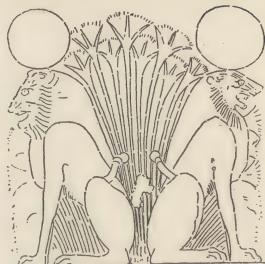
At all events, both texts and religious Hindoo art, and it pictures inform us very explicitly as to is even known to the sacred character and meaning of the Theosophists the flower and its plant in Egypt, and of our own time. I have collected some of the obvious I once met a dis- cases of its association with acts of tinguished member worship; with Egyptian gods, and with funereal rites or superstitions in the whom the symbol text-cuts herewith. The appearance of various birds, animals and reptiles



The Ram (God Khnoum) and the Lotus (buds).



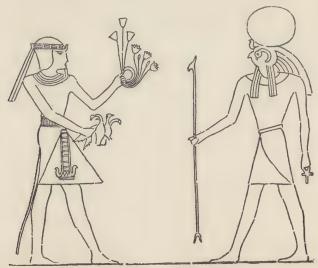
Osiris (the Sun in the lower world) before altar with Lotus.



The Sun lions, Ra and Osiris, supporting solar disks in the

in these illustrations deserves a word the son of Osiris. He is the sun of the

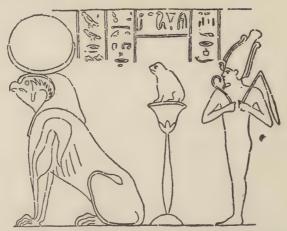
of explanation, which may be extended day in general, but the dawning sun to include a mention of some leading and the rising sun more especially. deities of the Egyptian Pantheon. This is why he appears as youth or Osiris is the sun of the lower world infant. The winged sun-globe which during its supposed return beneath the surmounts the portal of every Egyptian earth to the dawn of a new day. Hence temple is another form of Horus. The he is peculiarly the god of this world wings of the globe are the wings of the of departed spirits, the god of the hawk, who was sacred to the sun on Resurrection and of the mummy. account of the swiftness of his flight Therefore we find him frequently in and of his shining eyes. Horus frequently in and of his shining eyes. the guise of the mummy. Horus is quently has the head of a hawk, like



Tothmes III offering Lotuses and Geese to Ra (the Sun).



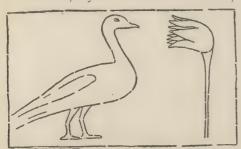
The Sun Hawk on Lotus.



The Frog (goddess Hek, Hyk, or Heka, and god Khnoum) on Lotus, with Osiris and Gryphon form of Horus.

named Seb, styled the father of Osiris, Nile.

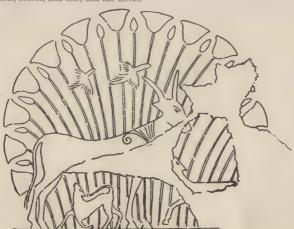
the sun-god Ra, who appears in the to Osiris himself, to Horus and to Isis. same way. Horus also appears as a This goddess was the spouse of Osiris hawk entire, as a lion and human-headed and mother of Horus. One of her lion or Sphinx, and as the gryphon forms was the fish; another was the combination of solar hawk and solar cow. Isis personifies the moon and lion. The goose is sacred to a god the fertility of the earth watered by the



The Goose Seb, Osiris, Horus, and Isis) and the Lotus.



Fish (emblems of Isis' with Lotus.



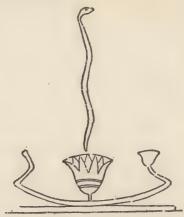
Isis or Hathor as cow1 in the Letus bower.







The Asp and Lotus.



The Serpent and the Lotus in the Solar bark

The bull, lion, asp and serpent purpose. As regards the animal forms, were all sacred to various solar gods. it will be understood that they are in



The mummy and the Lotus, from the "Book of the Dead."

The gods Ammon and Khem are equivalents of Osiris. The ram is a form of Ammon, who appears also with the ram's head. Finally, we have the funereal significance the lotus, as sign of immortality, illustrated in the quaint figures of the Genii of the Dead standing on the lotus, from a picture of the "Last Judgment"), and in the human head resting on the lotus. This design is found in illustrated copies of the "Book of the Dead," and belongs to the chapter which relates to the lotus as one of the habitations of the blessed dead. We have also the mummy in its sacred barge confronting the water-lily. The god Toum is the setting sun and appears crowned with the lotus.

I have only specified the Egyptian deities whose own forms or equivalent sacred animals appear in my illustrations, but they are sufficient for my



Nefer-Toum (the setting sun) crowned with Lotus.

every sense equivalents and representatives of the given delties. That these animals were originally themselves



Sphinxes and the Lotus.

totem gods is probable, but in the development of solar worship which the Egyptian religion had reached when first known to us they had all been assimilated with solar gods. Hence in each illustration specified the lotus is an equivalent and additional symbol of divinity in general, of the sun, of the resurrection and of creative power. All these ideas were interchangeable or present at one and the same time.

III.

I am not responsible for the great vogue of the lotus in ancient Egyptian ornament. The facts which I have proven for the history of Greek art have, however, an appearance of extreme improbability until this vogue is appreciated, and for the benefit of those who have no time to consult the folio publications of Egyptian antiquities it seems advisable to explain it. The following facts are elementary.

Oriental nations and barbaric nations do not make pictures unless they have a meaning to convey or an idea to express. Pictures for the sake of the picture itself as a "work of art" are unknown to them. Orientalists are well aware that all the so-called decorative art and decorative patterns of Chinese, Japanese and Hindoo art are connected with religious or symbolizing uses and originally derived from pictures. The facts about primitive or Oriental humanity which we so clumsily express to ourselves by the word "symbolism,"

simply go back to pictorial methods of expression which are natural and necessary to peoples which did not know printing, to whom literary expression was foreign, clumsy, or difficult, and whose imagination was child-like and vivid. To the savage and the primitive man the picture or image has a magical quality.* There is not one line on the most ordinary piece of Zuni pottery which has not magical significance to the maker. The picture or image is supposed to retain the qualities and the powers of the original. We have the authority of Maspero for the assertion that in Egypt every picture painted on a piece of furniture, a utensil, or the wall of a house, was a talisman endowing the object with the mystic power of the original. We must then for the moment move back from the picture to the original—that is, to the phenomena of fetichism.

Animals and plants are to primitive man mysterious and magical creatures—gods or the dwelling places of gods, and furthermore endowed with human intelligence and faculties. The plant is not less a living thing than the animal‡, may therefore like the animal be a dwelling place of a god, or of a transmigrated man§ who is or may be himself a god.

Given the above elementary facts and we understand why an Egyptian museum is a collection of mummied cats, of wooden hawks, of small bronze bulls and of porcelain beetles. the various forms of life conceived as habitations, counterparts and representatives of divine power, the waterlily was to Egypt of peculiar importance, and its picture or simulacrum, according to principles stated, carried with itself the mystic power of the plant it-The fertilizing power of the Nile water and of its slime was the most important fact in Egyptian daily life, and therefore in Egyptian Cosmogony. All created things were con-

^{*}See Frazer's "Golden Bough."

[†]Hence the magical use of small images of persons who are tortured or killed through the image—an art known to the negroes and to the Middle Age.

[#]Frazer's "Golden Boughs."

[§]See Frazer's account of the Turtle clan among the Zunis.

ceived to be an offspring of this primeval slime or of its watery basis, and the lotus was "the flower which was in the Beginning, the glorious lily of the great water." The sun, which was worshiped as the greatest of gods, was also believed to be an emanation of Therefore, the water-lily moisture. was its counterpart, its sacred flower, its divine sign-laid on the altar of every god, given to the guest at the funeral, buried with the mummy, painted on the tomb, carved on the temple. It is not I, but the Egyptian, who was the monomaniac, the enthusiast, and the man of one idea. For my own part I have several.

All this, it may be said, that you have told us is an argument that destroys itself. The lotus was great but it was not almighty; were there then no pictures of lions, or of asps, no images of beetles? Were there no other sacred How, then, can the lotus plants? alone be the basis of all Egyptian decorative art and the pattern of all the forms of Greek ornament. To this I should answer that I have never asserted all Egyptian patterns or all Greek patterns to be derived from the lotus, although this has been supposed by several published criticisms. I have proven, or attempted to prove, that certain patterns are lotus derivatives, but I have left it to my critics to specify the origin of those patterns which I have omitted to mention. In my book I have made no general assertions denying the existence of patterns not derived from the lotus. There is in my book no summary of facts to be proven and no recapitulation of conclusions drawn. Each chapter stands by itself and each chapter has a different topic. It may appear that when the volute, spiral scroll, concentric



Ionic capital derived from Lotus.



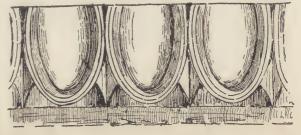
Typical Egyptian meander derived from Lotus.



Spiral Scroll derived from Lotus.



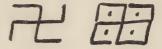
Greek Anthemion derived from Lotus.



Egg and dart moulding derived from Lotus.



Egyptian tomb spiral.



Swastika diagrams.

rings, meander, rosette, "honeysuckle," spiral scroll and the meander (of "ivy-leaf," and egg-and-dart moulding, which I have proven the Swastika to be have been specified—there is not much a section). It is true that these are left—but this is not my fault. It is the practically the only patterns of Prehislimitation of Greek art, not I, that is to toric Europe, but here again the limiblame.

The odd thing is that I could have sible. be found in the "Grammar of the they are ignorant. Lotus" (p. 373): "It is by no means

tation is not one for which I am respon-If I were to assert that all reviewed myself much better in an ad- known liqueurs are made in Europe, it verse sense than any of the critics who is no argument to reply that the asserhave antagonized a position I have not tion is improbable because whiskey is taken; supposing that I had taken it. made in America. The fact is that the Some of my reviewers appear to have limitations of conventional pattern been limited in their knowledge of ornament are of so peculiar a nature Greek and Egyptian ornament to the that they offer a very strong argument patterns described and illustrated by my in behalf of my positions, but these limbook. Regarding prehistoric ornament itations also appear to be unknown to in general (Ancient American, Polyne- my adverse critics, and it is useless to sian, etc.,) the following passage will ask them to account for a fact of which

To return to my demonstrations for assumed that the naturalism which Greek ornament, I will again admit invaded ancient ornamental art as that the Ionic form, spiral scroll, meanearly as the fourth century B. C. der, rosette, anthemion, "ivy leaf," and has not had also an influence of a egg-and-dart patterns (with its variwidespread character. Nor is it as- ants), cover most of the ground, and I sumed that a Dyak, for instance, does am positive that in fifteen years there not, from his own motion, supple- will not be found one archæologist who ment the patterns which have been in will not admit that they are all lotus question, by others drawn from natur- derivatives—but there are two points to alistic instinct or his own peculiar symbem ade here against my adverse critics. bolisms. The position taken is simply First—the limitation of Greek ornament that the civilization which first per- to certain elementary forms, from which fected pattern ornament had so high a all others are evolutions, is a very pecudegree of development in very early liar fact, demanding an explanation, times, as compared with any other, that which explanation has not previously it has insensibly affected all, first by its been offered. Second, not one of my civilization, second by the patterns adverse critics has brought me to book which went with it. It is a matter of for my omission of the so-called historic fact which is in question, a "acanthus leaf" from the list of Greek matter of fact to which the history of patterns—no one of the persons assumthe alphabet offers surprising analogies ing that I had claimed all Greek patand which the history of the alphabet terns to be lotuses in derivation has largely explains." In the discussion of called attention to the profusion of prehistoric and (sup- these "acanthus" patterns in later posed) barbaric orna- Greek ornament. This was about the ment I have confined only criticism that I expected on my myself to four pat-chapters for Greek art, and it is the terns — the chevron, only really serious one that could be concentric rings, the offered. I omitted the "acanthus"



Melian spiral scroll.

cause I did not reach a satisfactory so- that they did not know much and what lution until the work was in press. will now announce the apparently impossible fact that the evolution of the acanthus motive was by way of the egg-and-dart pattern and I will furnish the demonstration in another paper. I bolic use in Egyptian ornament, how omitted the Corinthian capital from can we account for the exclusion of my work because no solution of its other symbols from pattern ornament. problem which does not include the Answer first-other symbols were not acanthus would be satisfactory, and I excluded, although they were not will say here that various suggestions nearly as common and none of them that the Corinthian capital is a lotus are known to have influenced the Greeks derivative, which have been made by or the prehistoric nations. other students,* must be considered

stration has been published.

a point to which I am really returning. basis of any pattern which has not been published in my book. There are a number of diaper patterns which I have not published, although many or most assertion further than proof, which person I am not. Yet no one of those ashave not taken, has used as an arguis positively not a lotus. No one has specified against my assumed position the ceiling pattern of grape bunches and vine leaves at Thebes. Furthermore, no one has urged against my assumed position that patterns of "anks" and "tats" are fairly frequent in Egyptian art and projected asp patterns very frequent. From which I argue two things—that some reviewers have not read my book very carefully and that they were willing to accuse me of being an extremist without knowing themselves much about the

from the "Grammar of the Lotus" be- subject of patterns—or, in other words, I they did know they learned from me in

too great a hurry.

Now I am prepared to come back to the initial objection. Admitted the significance of the lotus and its sym-

I will pose a second answer by putpremature until my acanthus demon- ting another question to my assumed antagonist. Why is it that when the I have apparently moved away from lion, bull, ram, cow, serpent, asp, cat, crocodile, ichneumon, ibex, gazelle, It has been assumed by some critics fish, hawk, goose, ibis, vulture, heron, that I have announced the lotus as the cynocephalus, jackal, dog, scorpion basis of all Egyptian patterns. Now and beetle (scarabæus) were all solar I have not announced the lotus as the or divine animals, representing deities whose worship was more or less equally popular in Egypt—that the enameled clay and stone amulets of the scarabæus outnumber the enameled of them might be included as lotus de- clay amulets of the other animals rivatives by a person willing to carry named all added together by the proportion of about ten thousand to one. One answer certainly is that the form suming me to have taken a position I of a beetle as represented with closed wings can be fairly copied in enameled ment against me the existence of the clay without any mechanical difficulty. star pattern in Egyptian ceilings, which It is oval above and flat below and can be moulded easily. These amulets are very small and it is much more difficult to make a small clay lion, hawk or bull, and the object would be much more fragile when made. Then, in the next place, the Egyptians were extremely conservative and absolutely tied down by tradition. They never did anything which they were not in the habit of doing, to put the matter in an Irish way. This answer appears sufficient in most cases. In other cases—for instance, the fish—we are able to say definitely that the symbol had not nearly as great a vogue. On the other hand, the beetle is almost, if not absolutely, unknown in bronze, in which material most of the animals above named are very frequent. Scarabs are unknown in wood and so are serpents and lions. Wooden hawks are very common. Now to give an

^{*}For instance, by my reviewer of the New York "Na-on," and by Professor Allan Marquand, of Princeton.

^{**}For instance, by the New York "Critic," which in general passed a very favorable verdict on my work—" It is not too much to say that Mr. Goodyear has put a new complexion on the whole subject"—and by the New York "Nation," whose notice was highly complimentary in all senses, although questioning a number of my positions.







Isis crowned with Lotus.



Solar Disk on Lotus.



The Genii of Amenti on the Lotus.

explanation is not always possible but worship when in other respects they patterns, but to an enormously greater gards amount of use and repetition is degree. The lotus was not only an simply phenomenal. emblem of one god, but it was an em-Hindoos and Japanese, which in other grow from what is repeated. Assyrians show so many traces of lotus significance have been mentioned), and

the fact is there. And the fact is; as were less obviously Egyptian, this again small amulets (amulets proper) are must point to the fact that a foreign largely confined to enameled clay; influence is most apparent in what was that the scarabæus is the typical Egyp- most peculiar to the race having the tian amulet for animal forms. It may influence—or else the fact again points easily be conceded that its vogue was to an earlier community of race. Now, also much greater. (It was especially an in the case of the lotus for surface patemblem of the god Ptah of Memphis). tern, as in the case of the scarab for Now what holds of the scarabæus in amulets, the fact is there, explain it as amulets holds of the lotus in surface you will, that its ascendancy as re-

But the main point appears yet in reblem of all. It is found also as the serve. I have observed that some counterpart and equivalent of every people do not sufficiently consider what sacred animal mentioned, which again fact is involved in the distinction beenormously increases its ascendancy tween a picture and a pattern—the or repetition. It also appears on nearly fact, namely, of indefinite repetition. all pictured altars of offerings, however An artist would scarcely attempt an varied the other offerings may be. To indefinite repetition of pictures of lions explain the general frequency of the or rams; the effort is too laborious, belotus picture we may suggest also that cause the picture is too complicated. it was a fetich of greater antiquity or On the other hand, the repetition of greater popularity than most. That lotus flowers, lotus buds, lotus leaves, it was more popular is certain, and it or lotus rosettes is easy. Patterns has been a symbol with nations like the grow: they are not made; and they respects show no trace of Egyptian in- question may then be raised, why not fluence. This points either to a high other flowers and plants beside the loantiquity of lotus fetichism with a race tus? I answer, that is the affair of the from which both Hindoos and Egyp- Egyptian priests, not mine-invent tians sprang, or else it points to an in- your own explanation. If you care to fluence of Egypt on Hindoostan by way accept mine, here it is. There does of Assyria and Assyrian lotus patterns. not appear to have been any plant In either case the resulting argument which was as significant or as sacred is the same. If the Phenicians and as the water-lily (the reasons for this

that was not significant and sacred.

New York Nation says: "We see in tians who had "a great variety of their ornament, for instance, a variety flowers before their eyes in nature" of campaniform flowers, of very distinct types, carefully discriminated. flower." Are there not many flowers They had undoubtedly a great variety which are not campaniform? The fact of such flowers before their eyes in nature, and while they gave the lotus paniform flower" in Egyptian ornapre-eminence it is easier to believe that ment; not a great variety. One type they took their decorative material is the natural lotus, with various conwhere they found it than that they la- ventional evolutions—the other type is boriously travestied their sacred symbol the outline copy of a lotus amulet made of into such various and uncharacteristic hard material (the so-called papyrus) forms as are ascribed to it." It is the with conventional evolutions. theory and habit of modern decorative
If we appeal to pictorial art or to art with which the reviewer has here hieroglyphic texts we find next in immentally endowed the Egyptians in his portance to the lotus as a divine plant own fancy. This use of "decorative -the Persea tree. Isis in the Persea material" so natural to us and so mat- tree is a common thing in Egyptian ter-of-course to the mind of a modern art, but we find no pattern of Persea reviewer was foreign to their stern and trees or of details of Persea trees in solemn fancy. The Egyptians did not Egyptian ornament. "decorate"—they painted talismans. Before we can invent or suggest a bo- the papyrus. Of this it may be said tanical original for any Egyptian con- that there is not one case in Egyptian ventional form of flower, campaniform art of a pattern formed of realistic or otherwise, we must have texts and papyrus. There is not one case in religious documents to prove that this Egyptian ornament of a so-called papyflower had a divine meaning, or else rus form which has not been called a we must have the flower in an unmis- lotus by some Egyptologist. takable realistic pictorial appearance will deal with the "papyrus" at some in a divine association. Now this can-other time. It is enough to say now not be shown for any flower but the lo- that if I know little about it others did not "laboriously travesty thing. A conventional decorative art sonal vision. In the year 1854 only one copying copies hastily with, or on, that is the original of the picture used to-tractable materials—or they are the day by Webster's Dictionary and by the result of rapid indication, subsequently Encyclopædia Britannica. misunderstood by artists using a pictorial symbol without reference to na- to the criticisms of various reviewers ture. (In the case of the egg-and-dart not to "best" them or even to vindicate moulding the empty space between the myself, which is not the affair of the flowers became the element of the public, but because the objections of tion that the Egyptians went to nature assuming that it was the sole origin of

nothing was tolerated in Egyptian art is erroneous-they went to tradition. Finally, I should turn the tables on From a contrary point of view the my reviewer by asking why the Egyp-

There still remains the question of tus. In the next place, the Egyptians know less. Extinct to-day in Egypt, it any- is unknown to Egyptologists by pertaught by theory has never existed be- correct modern picture of the realistic fore the decorative art craze. All con- papyrus had ever been published. That ventional departures from nature in picture was made in the eighteenth historic ornament are the result of century for Bruce's "Travels," and

I have devoted this much attention pattern.) For a thousand years By- the reviewers clearly suggest difficulties zantine art never looked at a human which will occur to the public in genfigure to copy it. It copied a tradi- eral. It appears, for instance, to the tional type of picture. Egyptian art reviewer of the Critic that I have can only be understood and studied in included all Egyptian patterns in my the same sense. The whole assump- work: "We cannot agree with him in

every sort of pattern, even in Egypt." Now this overlooks the point that I have proven the "pot-hook" of North



King Amenophis III. offering Lotuses to the God Amon.

European prehistoric ornament to be evolved from the goose. The fact is really that the conventional ornaments I have described do include the elementary forms of nearly all the purely conventional patterns of the later civilized world; but this is because our own conventional art is of classical derivation. Probably there is not a single form of typical ornament in classical art which cannot be traced to the lotus, but I have not said so in my book. As already stated, the ornaments of the "bronze culture" of prehistoric Europe are very limited in number. That they all have Egyptian counterparts is indisputable, and that they came from Egypt with the arts of metal to the Stone Age of the North is my assertion. That normal lotus forms together with the meander, chevron, concentric rings and spiral scroll, as found in ancient American art, are de-fixion of Christ is not found in the

that Dyak or Zuni ornament have no other elements.

In the very appreciative review in the Nation I also find a similar passage misstating my position as to Egyptian ornament: "It is incredible that the Egyptian having once accepted that plant (viz., the lotus) as the symbol of his deity and luminary, and used it for ornament, never admitted any other, never associated with it a single line of his own fancy or from any of the myriad natural or geometric forms that were forever under his eyes, but in the slow course of centuries developed all his great store of decorative forms out of this single flower." The fact is mainly that he did this incredible thing, but not in such an incredible way as to make it incredible.

It is incredible that a school of independent landscape painting was unknown to history until two hundred years ago. It is incredible that, since antiquity, landscapes were only found as the backgrounds of religious paintings until the fifteenth century; only found as the backgrounds of classical and religious paintings until the seventeenth century. It is incredible that the cruci-



The God Khem before shrine, supporting leaf of the Lotus.

rived from Mediterranean art is also earliest Christian art, and that it is my assertion—but I have not asserted omitted from one mosaic series where Palermo. an ancient nation.

Still debating this question of the patterns published in my book. I have volved. found that I have given the average ment of Sun Worship."

IV.

This is a long introduction, but I have found the point of supposed absurdity, inherent improbability, etc.,

every other event of the Passion is to outweigh some of the most absorepresented. It is incredible that the lutely conclusive proofs which were whole sixteenth century, all over ever put on paper. The Nation says: Europe, abandoned its Gothic naturalism for a return to classic conventionalgreat acuteness and range of eviism without reference to surrounding dence and with an opulence of citation nature in its pattern ornament. But from other authorities, and especially these are all facts, however incredible. from examples of the early art of all To the eighteenth century it was in- countries, that surprises the reader and credible that the Furies of Greek art at times almost takes his breath away are placid and beautiful figures, or that . . . the recurved petals of the lotus the Rondanini Medusa was evolved are shown to produce the Ionic flower, from the type of the Gorgon of the flower begets the volute, the volute As I have already said, the scroll, the scroll the there are certain Egyptian patterns centric rings. The addition of tanwhich I have not published, and I have gents to the rings produces the curasserted nothing of any pattern that I vilinear meander,* the meander the have not published. The main fact fret, the fret the Swastika; and the remains that Egyptian and classic argument is persuasive at every point." ornamental art are very curiously But—now comes the but. "The argulimited, and that I have been held ment is persuasive at every point," but responsible in some quarters for the "the argument proves too much." character and religion of the ancient . . . In the "logic of probabilities Egyptians, which explain this limita- the conclusion is weakened at each retion. It is so much easier to correct a move. It is not a chain which is as modern author than it is to understand strong everywhere as its weakest link.

The uncertainty is cumulative." This may so appear to a student who limitation of ancient ornament, let me has rapidly read through my book for turn again to the topic of Greek art. the purpose of review, but it will so It may be said: "If the star pattern, appear less and less to a student who, the ankh pattern, the tat pattern, and for a series of months or years, a pattern of grape bunches and vine examines the monuments and the publeaves are found in Egypt, how do you lications from which I have culled a know that they were not found in number of illustrations large for a Greek art." I answer-possibly they book, but very small, considering the may have been or were so found. I number of monuments and publications have asserted nothing except for the and the importance of the facts in-

What is requisite for the professional critic credit for a knowledge which he archæologist is first and foremost a does not possess regarding the patterns patient study of Cypriote vases. In which I have not published. And still I spite of the length of many reviews am willing to admit that I have pub- given my book, I have not met one lished most of the Egyptian and classic mention of my chapter on the Geopatterns and perhaps all the fundamen- metric lotuses of Cyprus, and yet that tal classic patterns except the "acan- chapter is the key to the entire situathus" which are known, and therefore tion. All my studies were inspired by I have entitled my book a "New His- the problems of the Cypriote vases. tory of Classic Ornament as a Develop- The evolutions of ornament which they exhibit must be the initial education of the lotus expert. They stand midway between the art of the ancient East and the art of Greece. I have not

^{*} Argument not quite correctly stated; intention good Concentric rings were derived from rings with langents rings with tangents from the spiral scroll.

spired by them.

gested by the pottery lotuses of through the Swastika. Cyprus. The result has been a work tions. It is the logic of the evolution so to avoid the appearance of being an itself which has led me. Where I extremist. started most of my critics stand already. I have not found one review except that of the Independent which has antagonized my theory of the It will be observed that I have Ionic volute, and Dr. Tylor, who does aimed in this paper to meet general not seem thoroughly convinced, has not made his reputation in the field of classic art. My first observation on was made in 1873, and I did not prove the point to my own satisfaction till 1887. The critics have done well who a little time and independent observa- metrical ornament will spontaneously tion. There is not much left in Greek follow." ornament when these elements are disposed of. The "acanthus" evolutions tion whether or no I have proven my are all of a late period.

made one discovery which was not in- lotus in the Egyptian art from which this lotus ornament came. It is here I did not begin my studies with any that the argument from concentric rings theory to prove or any definite end to applies-it fixes the solution. Itself attain. In July, 1887, I sat down to the most improbable of lotuses, it dewrite two pages for the American Jour- monstrates the spiral scroll—just as the nal of Archaelogy on the problem sug- meander is proven a lotus evolution

When the Ionic volute has been once of four hundred royal quarto pages, accepted, I do not see where to draw containing thirteen hundred illustra- the line, and I would gladly have done

V.

It will be observed that I have objections before offering subsequently special proofs, and I have acted on this principle, because it appears to me the lotiform origin of the Ionic volute necessary to meet my critics before appealing to the public. The latter would

otherwise distrust me.

From this point of view I have still an have reached the same conclusion objection to meet. As very well stated through the study of a few plates of by the Nation, this is "the extreme probillustrations in a day or a month. ability that different nations were work-But it has not been sufficiently consid- ing out apart their own habits of ornaered what is involved in the theory mentation, and the fact that there is a of the Ionic spirals. Not only is there considerable number of forms so obphilosophically no line to be drawn be- vious and inevitable that it would be a tween one form of spiral and another, wonder if they were not nearly unibut the identity of the Ionic spiral with versal. In point of fact, as we all know, the spirals of the anthemion "honey- certain ones are practically universal, suckle" has already been proven by an- and are reinvented every time an unother archæologist (Dr. Joseph Thacher taught person tries to invent ornament; Clarke). Whatever proves the Ionic others, such as the fret, meander and Capital to be a lotus carries the anthe- rosette, we may fairly say, are found mion with it. I never yet have met a wherever a people have by practice despecialist in architecture, art, or archæ-veloped a system of ornament. Most ology, who did not immediately concede of these simple elements are found in the origin of the egg-and-dart mould- the ornament of every savage tribe ing, as soon as illustrated. The Christhat has attained a little skill." As the tian Union critic is the only one who Christian Union puts it, "Children who expresses a doubt on this head. The never saw a lotus draw rosettes." Or, demonstrations for the rosette are so according to the Critic: "Given the conclusive that it is only a question of tools and an instinct for decoration, geo-

These assertions simply beg the quespoints. They restate the belief which Now comes the question, can we ad- has so far been universal, and which I mit the spiral to be a lotus in Greek art have shared with the rest of the world invariably (a point which can be until I saw cause to think differently. proven to satiety) and deny it to be a First, they overlook the surroundings child draws rosettes who is blind, and that does not go back to nature by a every child, who sees, has seen rosettes series of conventional variations is before attempting to draw them. These one which has to be proven. More rosettes in modern use which the than all, I challenge the assertion most child has seen are a direct tradi- distinctly that "most of these simple tional inheritance from classical elements (viz., the fret, meander and antiquity. Our own meanders are all rosette) are found in the ornaments of of classical origin and so are all our every savage tribe that has attained a spiral scrolls. Our trefoils and anthe- little skill." Within my observation mions are all a traditional inheritance the rosette is unknown to savage Afrifrom classical antiquity. Why should can ornament.* It is so little known we assert for savage nations a talent to Polynesia that I can only quote one and inventive capacity which we do case (viz., Samoa) in one individual innot put in practice ourselves? It ap- stance. The rosette is not common in pears to me that critics who make these ancient American ornament. I know assertions have not studied the history it in stone carving (at the top of stone of Renaissance ornament, or have for- posts) at Labnah, but I do not know it the artificial efforts to teach off-hand thinks he knows it). The rosette is conventional design to children which fairly common on Zuni vases. In all the traditional. There is not a spiral mission. scroll ornament in the civilized world even found in modern artificial civilizaown ornament.

we continue to claim for savage tribes concentric rings and spiral scroll were a general faculty for inventing meanders, spiral scrolls and rosettes? I hold that the contention that savage

and facts of modern civilization. No tribes ever make an abstract pattern gotten it, or that they are led astray by at Uxmal (where the Nation reviewer have come into fashion since the decor- above cases I assert it to be derivative. ative art craze and the discovery of The rosette is absolutely unknown to Owen Jones that good historic orna- North European prehistoric ornament. ment has been mainly conventional. The meander is so rare in Polynesia, Since the decorative art movement we that I have never seen an instance; it have seen many diaper patterns on oil- is unknown to savage Africa. My concloths and wall-papers which are a tention is that all forms of the spiral in product of this new artificial training; Polynesia have moved from a Malay but the conventional patterns of wood- centre, and when we strike Malay work, metal-work and stone-carving, ornament we stand on solid ground as the traditional forms of trefoil, scroll, regards the lotus. The Dyak (Malay) meander and anthemion are still ornament is conclusive testimony and the most prevalent, and they are points to Hindoo or Phenician trans-

To quote again from the Nation: to-day that does not show Renais- "The argument amounts to the assersance influence and origin, and down tion that the art and religion of all the to 18 o there was not a conventional world and, therefore, almost necessarily design in civilized countries that was the civilization, were the gift of a single not traditional. I reassert, then, that people, transmitted in turn to every the inventive faculty boasted of, is not other, to the absolute denial of any other initiative or independent develoption. When we move back to the ment." This approximates to a state-Greeks it becomes a question of fact ment of my position, not as regards that, whatever the origin of the orna- art (although certain forms of ornament as regards nature, the ornaments ment are in question), not as regards themselves were all borrowed. The religion-but as regards civilizationnation which is conceded to have had a decidedly yes! My position is that supreme talent for decoration did not the first substantial step in civilization invent one elementary motive of its was the discovery of bronze, that this discovery was made in Egypt, and that When these facts are conceded, shall the patterns of the chevron, meander,

^{*} It is found in the gold jewelry of the Ashantees, who also have the Swastika and the normal lotus.

[†] It traveled from the south as far as Halstatt.

transmitted to the Stone Age of North- Greek ornament is Egyptian through-

ern Europe with the arts of metal. out in elementary origin, and that the My position is that Ancient America experienced influences of Mediterranean culture through Phenician voyages or otherwise. My position is that any of the patterns in question, as sparsely found in Polynesia, are traceable to Malay influence. My position is that

Wm. H. Goodyear.

(TO BE CONTINUED.)





"WATCHMAN, WHAT OF THE NIGHT?"

ATCHMAN, what of the Night? What of the Night?"
"No sign of Day, my Heart, no sign of Day.
The wheeling stars drop down into the Night,
And, for the coming of the light, my Heart, I pray."

"Watchman, what hearest thou? Some whisper stirred Within the vastness, like a summer air."

"No. No, my Heart, 't was thy own throb I heard; This silence is God's voice, and I despair."

"Watchman, what hopest thou, of Joy, or Pain?"
"Oh! hush, my Heart, Hope is a thing so frail;
I dare not think, lest Thought should prove Hope vain
And rob Life of a light that burns so pale."

"Watchman, what thinkest thou: 'T were well to pray?"

"I have sent a prayer, my Heart, beyond the Night;

Dove-like, perchance, it may have reached God's Day,

And yet may bring glad tokens of the light."

Harry W. Desmond.



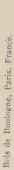
Modern

Rrench

Residences

[From "La Construction Moderne."]



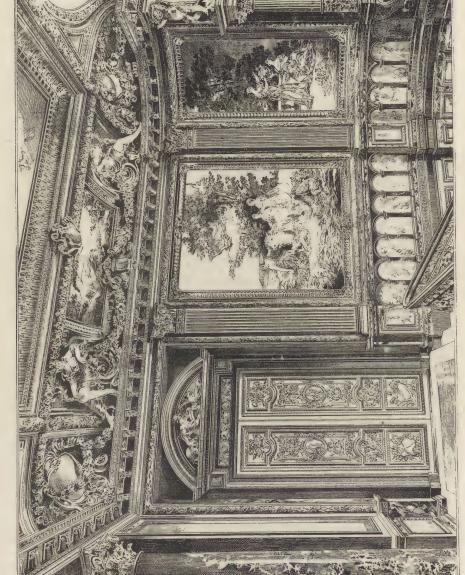






Bois de Boulogne, Paris, France.

GRAND STAIRCASE.



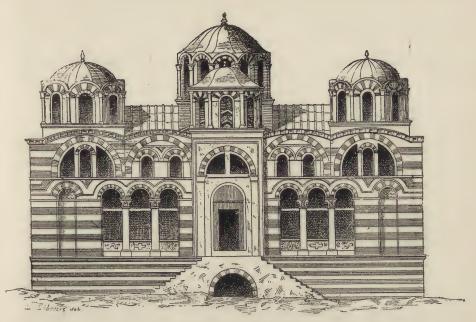


Bois de Boulogne, Paris, France.



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FAÇADE OF THE THÉOTOCOS.

BYZANTINE ARCHITECTURE.

Part III.—SECULAR BYZANTINE.



as the seat of the lower Empire, we might expect that when it was taken by Mahomet the Second (May 29, 1453) all the national build-

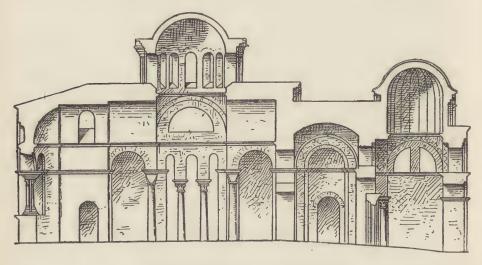
ings would be destroyed, and as Mathat, if nothing else were destroyed, the them, and to settle the question. churches would be; in fact most of the curiously enough the Christian churches were found to be so perfectly adapted to

S Constantinople was a the Christian churches, and the step in Christian city as well front of the Kibla was put at right angles to it, which makes many believe that the churches are out of the square.

James Ferguson believed that many of the Turks were still housed in the old palaces; but, from domestic privacy being fanatically cherished by them, it homet and his Turks were Mussulmans is impossible for antiquaries to enter

The Marquis de Voguë has found secular buildings were destroyed, but ruins of churches, of secular public buildings, and of private houses in Central Syria; but their requirements must the Mussulman ritual, that a great num- have been different from those of the ber of them, including Sta. Sophia were Roman palaces at Constantinople, even converted into mosques, and the con- if the difference of climate were alone version they required was small, the to be taken into consideration. The altars, inconostases, and the ambos nearest approach we have to the Bywere removed, the Mihrab or Kibla was zantine palaces of Constantine's time is set out on the line of Mecca, which probably the Palace of Diocletian at rarely coincides with the orientation of Spalato; still there are plenty of descriptions in the Byzantine writers of Romans migrated to Byzantium; but,

parts of the Imperial Palace at Con- on the contrary, the Byzantine emstantinople. As the Imperial Palace perors, who were mostly of barbarian was of great magnificence, I will give origin, tried to make up for the loss of you a description of it. Through the art by the lavish use of gold, silver, indefatigable industry of Labarte, par- enamel, and jewels. The Bulgarian ticulars were gathered by him from the peasant, Justinian, had a passion for Byzantine authors, and from these he costliness, not only in his own palace drew out a plan of it, as it existed and for his own court, but for churches in the tenth century, mainly from too, and the new Sta. Sophia having the description of Constantine Por- been built by him, and being the court phyrogenitus. I am mainly indebted cathedral, he spared no expense to



LONGITUDINAL SECTION OF THE THÉOTOCOS.

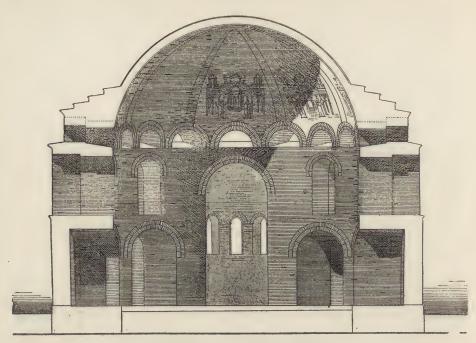
to him for the description. If this make it sumptuous; he had all the fitwith which it was decorated.

tion to the barbarians, and to this day

description were of no other use, it tings and furniture of the Bema made would at least enable you to com- of gold or solid silver, and this silver prehend much of the doings of the Em- was mostly gilt. Procopius tells us perors at Constantinople, which without that 40,000 pounds weight of silver was it would be incomprehensible. And given by Justinian for this purpose, and you will also hear of the magnificence he, the Empress, and the whole court and its attendants were clothed in Up to a certain period, Rome had equally sumptuous apparel. This latter given the ideas of sumptuous decorataste, however, was antecedent to Justinian, for not to speak of the dresses certain words in general use bear tes- of Diocletian and Constantine, we read timony to it. The oriel window was in Gibbon of the Emperor Julian calling the window to the golden parlor of the for a barber soon after his entrance monasteries, and these golden parlors into the imperial palace, when an officer were imitated from the gilded or gold-magnificently dressed presented him-plated rooms of the imperial palace. self. "It is a barber," exclaimed the We know that as early as the days of prince, with affected surprise, "that I Horace, grand houses had ceilings of want, and not a receiver-general of the ivory and gold. These habits of mag- finances," and on questioning the barnificence were not given up when the ber he was told that, besides a

they witnessed are thus described, apexaggeration: "They were first received by the Wezeer, who, at the augarden palace, displayed on this occasion a degree of magnificence that had never before been manifested by any of hung with tapestry of the value of 30,ooo deenárs; and the Wezeer himself hind his seat, when the two ambassasplendor that surrounded them, to beg for an interview with the Khaleefeh. El-Muktedir, having appointed a day on which he would receive them, ordered that the courts, and passages, filled with armed men, and that all the and sixty thousand armed soldiers were

large salary and some valuable per- The two ambassadors passed first by quisites he had a daily allowance for the palace of the chief chamberlain, twenty servants and as many horses. and, astonished at the splendid orna-The savage, and often naked, Arabs ments and pages and arms which they rapidly fell into this taste for costliness, there beheld, imagined that this was and even surpassed the originators, for the palace of the Khaleefeh; but what we read of the ambassadors of Con- they had seen here was eclipsed by stantine (the 7th) Porphyrogenitus, the what they beheld in the latter, where Artistic Emperor (916-959), visiting they were amazed by the sight of 38,the Caliph El-Muktedir (917-942) in ooo pieces of tapestry of gold-embroid-927, and being astonished at the mag- ered silk brocade, and 22,000 magnificence of his court. Lane, in his nificent carpets. Here also were two notes to the "Arabian Nights" gives menageries of beasts, by nature wild, the following account: "In the begin- but tamed by art, and eating from the ning of the year of the Flight, 305 hands of men; among them were 100 (June A.D. 927), two ambassadors from lions; each lion with its keeper. They the Roman Emperor (Constantine 7th, then entered the palace of the tree, in-Porphyrogenitus) arrived in Baghdad closing a pond, from which rose the on a mission to the Khaleefeh El- tree; this had eighteen branches, with Muktedir, bringing an abundance of leaves of various colors (being artificostly presents;" and the scenes which cial), and with birds of gold and silver. of every variety of kind and size, parently, however, not without some perched upon its branches, so constructed that each of them sang. Thence they passed into the garden, dience which he granted to them in his in which were furniture and utensils not to be enumerated; in the passages leading to it were suspended 10,000 gilt coats of mail. Being at length his rank; pages, memlooks, and soldiers conducted before El-Muktedir, they crowded the avenues and courts of his found him seated on a couch of ebony, mansion, the apartments of which were inlaid with gold and silver, to the right of which were hung nine necklaces of jewels, and the like to the left, the was surrounded by generals and other jewels of which outshone the light of officers on his right and left, and be- day. The two ambassadors paused at the distance of about a hundred cubits dors approached him, dazzled by the from the Khaleefeh, with the interpreter. Having left the presence, they were conducted through the palace, and were shown splendidly-caparisoned elephants, a giraffe, lynxes, and other beasts. They were then clad with and avenues of his palace should be robes of honor, and to each of them was brought fifty thousand dirhems, apartments should be furnished with together with dresses and other presthe utmost magnificence. A hundred ents. It is added that the ambassadors approached the palace through a street arranged in ranks in the approach to called the street of the 'Menárehs,' in the palace; next to these were the which were a thousand menarets. It was pages of the closets, and chief eunuchs, at the hour of noon; and as they passed clad in silk, and with belts set with the muëddins from all these menárehs jewels, in number 7,000; 4,000 white chanted the call to prayer at the same and 3,000 black; there were also 700 time, so that the earth almost quaked chamberlains, and beautifully orna- at the sound, and the ambassadors mented boats of various kinds were were struck with fear." ("The Thouseen floating upon the Tigris, hard by. sand-and-One Nights," Lane, 3 vols.,



SECTION OF ST. GEORGE, SALONICA.

of Baghdad.)

the rarities and Caliph's counterpart of those of Byzantine Court. into two aisles and a nave, by six columns on each side; at the end was a dais, reached by steps of green marble, was draped.

8vo., London, 1859. Note to the story was of gold, enriched with precious of the Second Lady of the Three Ladies stones. There were birds that warbled by ingenious mechanism; close to the I give you this extract partly be- throne there was an enormous cross of cause the Imperial Palace as shown is gold covered with precious stones; of the date of Constantine Porphyro-genitus, and partly to show you that for the members of the Imperial famceremonials of ily. At the bottom of the steps of the palace were almost dais on which the throne was placed the were two lions, which raised themselves The Grand Tri- on their paws and roared like real lions; clinium of Magnaurus was built by not far from the throne golden trees Constantine the Great, and much re- bore on their branches birds of differsembled the great hall of Diocletian's ent sorts who imitated the harmonious Palace. It was used by the Emperors song of the birds whose form they borfor the reception of Princes and Am- rowed; a great organ, enriched with bassadors, and was a vast hall formed precious stones and enamels, was also placed there."

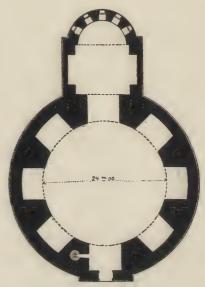
The palace of the tenth century was built piecemeal. Constantine built his with an apse at the back; two columns palace, which was largely added to by on each side of this apse supported that great builder, Justinian; subsecurtains with which the end of the hall quent Emperors made additions, built new palaces, or new suites of apart-"The Emperor was robed in the Imments for themselves. We can easily perial dress before mounting the throne, understand that those who had murcalled the throne of Solomon, and all dered their predecessors had delicacy the Senators and grand dignitaries enough to prefer using new rooms were there assembled. The throne which did not remind them of their

crimes. until a new palace was built at Blach- museum, and the built obelisk of Theoernæ, on the Golden Horn, and the old dosius stripped of its brazen covering. palace was less and less used, until it The palace was not one building with was finally abandoned. Benjamin of an architectural front, but was a con-Tudela, the Jewish Rabbi, who visited glomeration of buildings, open areas, Constantinople in the twelfth century, passages, baths, churches and oratories, only speaks of the palace at Blachernæ, stables and gardens. The main group and when Mahomet II. took Constan- consisted of three palaces, called the tinople there were only the ruins of the Chalce, the Daphne and the Sacred

old Imperial palace.

fessing Christianity, had not done away drome, the Forum Augusteum, the with the old Pagan worship, and was Baths, the Cathedral and the Palace only baptised on his death-bed by an Arian bishop. In the old Roman days religion was intimately connected with every act of life, and as the Christians increased in number and power they substituted the Christian worship for the Pagan, but kept up the old custom of associating it with every act of life, so that cathedrals, churches, baptisteries, chapels and oratories became as frequent as the old temples and shrines. You will find the Împerial Palace crowded with these new religious buildings. Eventually Emperors, before they were crowned, had to make profession of the orthodox Christian faith, and as, in an ecclesiastical point of view, they were inferior persons to the Patriarch, they frequently had to attend public worship in the cathedral, and to have chapels and oratories at hand to say their prayers in. The bulk of the rooms on the south side of Sta. Sophia were mainly devoted to the Emperor's use. The hippodrome acted the part were joined together and really formed always presided over by the Emperor. The hippodrome begun by Septimius bouclon. Severus was finished by Constantine the bronze tripod of Delphi, with head- abolished the gladiatorial games, it

These additions were made less serpents, though one head is in the Palace; this last is considered by many Constantine the Great, though pro- as the palace proper; but the Hippo-



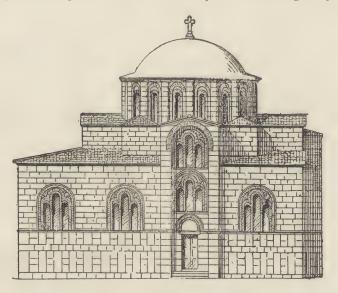
PLAN OF ST. GEORGE, SALONICA.

of the old Roman forum, where the a sort of whole, while smaller palaces people assembled and criticised the were dotted about the grounds and Emperor's ways, and the games were were called the Aetos, the Boucoléon, the Porphyry Palace and the Penta-cou-

I think the simplest plan will be to the Great. It had a great influence begin with the Hippodrome and describe on Constantinople, for Constantine set the position and collocation of the parts. out his palace at right angles to it, and It had the form of the Roman circus, subsequently Sta. Sophia was set out only the triumphal gate at the south in the same way parallel with the end was obliged to be left out on acpalace. The hippodrome was once a count of the steepness of the ground. museum of art; the horses of St. Mark, It had four gates, two to the east and which were taken by Theodosius II. west, nearly opposite the south meta. from the Island of Chios, came from the southeast gate being called the Gate it, now nothing remains but the obelisk, of Death, for though Constantine had

seems that the name of Porta Libitin- Empire by Constantine to adorn his ensis was still used; it was originally new capital. To the south of the Chalce so called because the bodies of the was the Palace of Daphne, and to the slaughtered gladiators were taken out east of these two the Sacred Palace. through it; and two gates, also east The Palace of the Chalce was almost and west, at the north end, nearly in entirely rebuilt by Justinian after it a line with the platform in front of the had been burnt in the riots of the Nika, Emperor's throne. At the back, far- and was entered from the southwest ther north, was the Palace of the Ca-corner of the Forum Augusteum by an thisma, and beyond that the Baths of iron door; the Atrium ended at the Zeuxippus. The northeast angle of south by a hemicycle covered by a semithese baths touched the southwest angle dome. South of this was a domed hall,

of the Forum Augusteum, a moderate- ending southwards with a smaller sized square, about 623 feet from east hemicycle. I here give you the de-



FACADE OF DAPHNE, NEAR ATHENS.

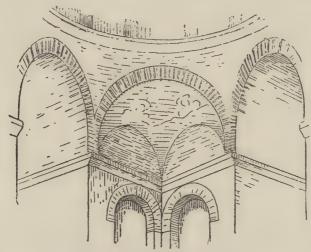
on the north Sta. Sophia, the Emperor's

to west, by 460 feet from north to south, scription of it from Procopius (Lib. I., about the size of the Place Vendôme at cap. 10):- "As, according to the pro-The Forum was surrounded by verb, we know the lion by his claw, so a peristyle or cloister; on the south my readers will learn the magnificence side it bounded the Palace of the Chalce; of this palace from the entrance hall. This entrance hall is the building called rooms, however, projecting into it; on Chalce; its four walls stand in a quadthe east it touched the face of the rangular form, and are very lofty; they Senate House, the Church of St. Mary are equal to one another in all respects, Chalcopratiana, and the front area of except that those on the north and south the grand Triclinium of Magnaurus; sides are a little shorter than the others. on the west side I know not what it In each angle of them stands a pier of touched, but on this side were the very well-wrought stone, reaching from chapels of St. Constantine and St. Mary the floor to the summit of the wall, of the Forum. This Forum of Augustus quadrangular in form and joining the contained most of the sculpture and wall on one of its sides; they do not in statues that had been taken from any way destroy the beauty of the place, the different provinces of the Roman but even add ornament to it by the

symmetry of their position. them are suspended eight arches, four crown. At the side of it was a large the south and two towards the north in the middle by a fence and gate, support the arched roof which is sus-called the curtains, through which pended over those spaces."

you enter into the oratory of the Saviour Lord, the Royal Chapel, up to the containing the tomb of the Emperor time of Basil the Macedonian (867-John Zimisces (969-976); to the north 886). At the back of this church was and east of this was the Noumera, used a passage that led into the Phiale of

Above the homage of the great officers of the of which support the roof, which rises dining-room where the Emperors dined above the whole work in a spherical the dignitaries on festivals; in front of form, whilst the others, two of which these four halls last mentioned was an rest on the neighboring wall towards open yard, about 65 feet wide, divided the Emperor occasionally rode; it was From this vestibule to the westward prolonged up to the Church of Our as a prison; from the vestibule to the the Sacred Palace, but by passing



DAPHNE-INTERIOR OF THE CUPOLA.

east you entered through a splendid through the sacristy of the church one bronze door into the Triclinium of the entered the Heliacon, or open area of Scholars. They were a part of the the grand Triclinium of Magnaurus, Prætorian guard. At the southwest the splendors of which I have before end of this was the chapel of the described. On entering the Palace of Apostles; to the east of the Triclinium Daphne from the hippodrome by the of the Scholars was a passage and the door, you come into a large open court lychnos, where the Emperor received having a guard room called the porter's the homage of his servants and be-lodge in the southwest angle, and to stowed dignities on them; to the east the south of this was the covered of this was the Triclinium of the Ex- hippodrome of the palace originally cubitors, another band of Prætorians, used by the Emperors, but it afterand that of the candidates, a cohort of wards served as a shelter for the Senathe Emperor's guard; at the west end tors' horses when the Senators waited of this hall was a dome on eight col- on the Emperor at his palace; at the umns, under which was a great silver west corner of this was a staircase cross. Near it was the grand consist- by which a garden called Phiale was ory, which had three ivory doors. At entered; then came open courts with the end was the Emperor's throne, cov-ered by a cyborium, where he received St. Mary of Daphne; then the oratory

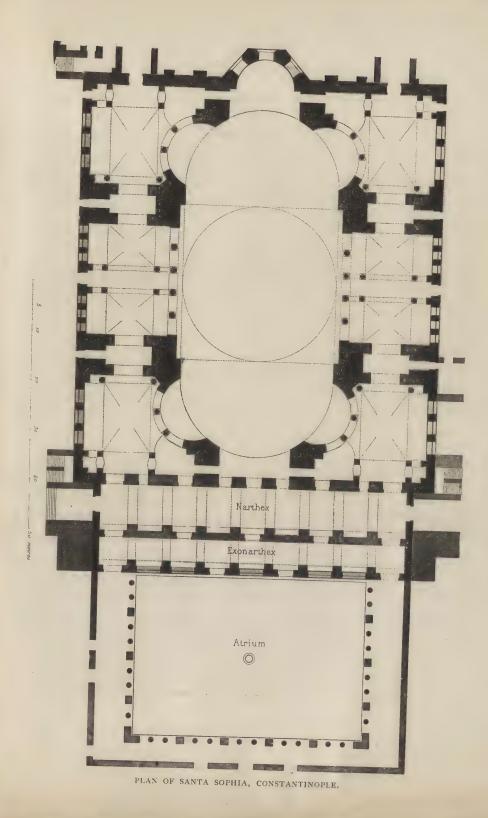


VIEW OF SANTA SOPHIA, CONSTANTINOPLE.

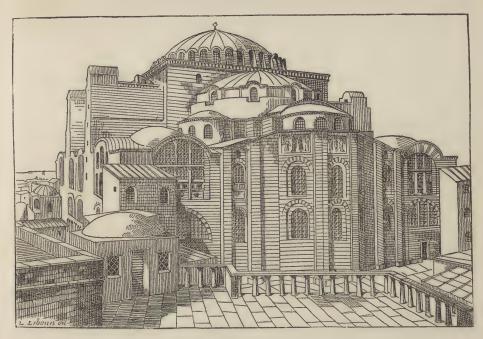
tinianos; the Triclinum Augusteos was covered with purple, and they could a vast hall used for receiving the hom- only be lifted on to the tables by gilded ages of the functionaries, and was often leather ropes and pulleys; there were used for crowning the Empresses; be- two silver columns at the end, between yond was an octagonal hall and the which was the Emperor's throne. It Emperor's bedroom, where he left his was not only used for grand dinners, imperial robes and crown after attend- but for grand receptions; many of the ing service in state at Sta. Sophia; then Empresses were crowned here, and the a long open corridor or peristyle, which Cæsars were here installed. I may say led to the Church of St. Stephen, that that at the close of the old Roman preceded the platform of the Cathisma Empire, and during the continuance of games. The Emperor Heraclius was For instance, Constantine was made crowned here, and it was used for cele- Cæsar by Galerius, but claimed to be courts and chambers of the Palace of were laid in state. Daphne; the Grand Triclinum of gold, and fruit was served in three meaning of the word phiale was a

of the Holy Trinity, the baptistery gold vases, so heavy that they had to and a staircase leading into the Jus- be wheeled on carriages, which were Palace, and overlooked the race-course; the Lower Empire, the second of the from the windows of this church the joint Emperors was called Augustus, ladies of the court saw the races and and the heir to the throne, Cæsar. brating the marriages of the Emperors. made Augustus; and the same dispute Above, to the north of this open took place between Constantius and corridor, and between the Palace of Julian. In this Triclinum of the Ninethe Chalce, were the remaining open teen Couches, deceased Emperors

The Sacred Palace had an atrium N neteen Couches; it was divided into semi-circular at both ends, and the three parts—the portico, the dining- mysterious phiale of the rpinoxxos, room and the bedroom. Here the or triple shell, its mysteriousness Emperor entertained guests at Christ- was probably owing to its acting as mas. All the plate used was of a whispering-gallery. The original



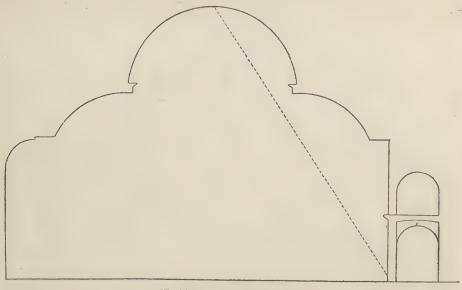
SANTA SOPHIA-PLAN OF CUPOLAS.



THE APSE OF SANTA SOPHIA.

but the word was afterwards used end two bronze lions' heads spouted for the flat basin of a fountain, and water into a vase, and in the middle then for any open space with a foun- was a little edifice of four columns tain in it. The triple shell applied to supporting a dome, under which the the half domes of the apses; there were Emperor's throne was placed when three apses. I believe $n\delta\gamma\chi\sigma$ is used games went on in the courtyard; in when the inside of a squinch is holfront of the throne was a balcony; lowed out like a shell. From the north to the north of this was the Tricside of this you entered into the Chapel linium Eros, used as a museum of hemicycle was a guard-house and a as a vestry by the clergy of the palace. door to the under part of the terrace of The two side doors that led into the of Daphne and a door to the baths; triconque was a hemicycle, eastern hemicycle led into the sigma, round it; the walls of this Triclinium a large and long room, with apses were covered with various-colored marat both ends, and three doors on its bles, and its ceiling was gilt, and pierced the ceiling, the walls were lined ministers. This probably also acted as with precious marbles, on which a whispering gallery, as well as the

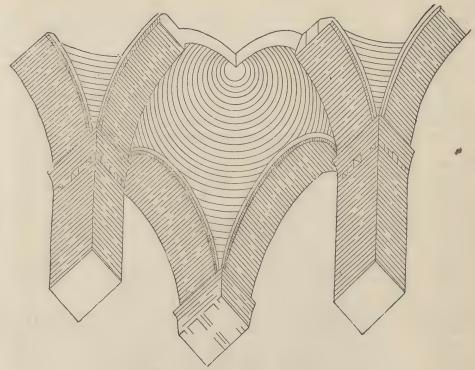
saucer, or round, flat drinking-cup; verses were engraved. At the south of St. John and from the south side arms. From the south end was entered into the baths; in the parts behind the a room called Triclinium Pyxites, used Daphne. There was also a door into the triple shell were of bronze, the middle hemicycle, a door to the under-portico one of silver. The room itself, the there was also a door into the hemi- which three apses were recessed; the cycle, and another into the courtyard. half domes of these were called the The phiale was also used for the games shells or conchs. Two columns on each played before the Emperor and his side of the east apse carried the archifriends. Two flights of steps round the volt, and this apse had steps or seats east side, so called from its resemblance for light. The Emperor Theophilus to the old Greek sigma, or C; fifteen (829-842) built this part of the Sacred columns of Phrygian marble supported Palace, and used to work here with his



ST. SOPHIA, CONSTANTINOPLE.

Forty Saints. It consists of an anteroom, a bedroom, and a sitting or din-

room under it. To the east was a of people eating fruit; at the south T-shaped gallery; to the north of this end was a double-apsed oratory to the gallery were the offices, with an open Virgin and St. Michael. Under it, court in the middle; to the south were on the ground-floor, was a room conthe kitchens, lit from the garden. The verted into a library by Constantine north end of the top of the T-shaped Porphyrogenitus; beyond was the gallery ran into another very long gal- coubouclion mesopatos; the ceiling lery, called "The Gallery of the Forty carried by four columns of Phrygian Saints"; to the north of this passage marble; the wall was covered with gold was the "Pearl," or an apartment mosaic, on which were trees of verde wholly built by Theophilus (829-842), antique; beyond was the Empress's surrounded on three sides by passages, dressing-room, and below it was her and on the fourth by the gallery of the bedroom, called the mosaic-room; the vaulted ceiling was supported by seven columns of Carian marble, its walls and ing-room. The roof of this dining-room roofs were covered with mosaic, and its was supported by eight columns of floors are said to have resembled a Rhodian marble (black and gold), and meadow enameled with flowers; then its walls were covered with marble mo- a room and an oratory to St. Agnes. saics of animals. The bedroom was The last had a staircase for the vaulted, was carried by four marble Empress on one side, and the recolumns, and was gilt, or of gold maining part was decorated like the mosaic. Out of the third apse of the former chamber, and had to the south three-shell Triclinium were the upper a vestibule into the garden, through winter rooms of the same Emperor, which she could go under the Tricalled the Carian, from being lined clinium Lausiacos to the Cenourgion. with Carian marble; and to the east of The Lausiacos was a long passage, it was the gallery. To the east of the north end of which went into this was the "Camilas," consisting the gallery of the Forty Saints, and of an ante-room and a vast hall lined the south into the grand Triclinium with verde antique, with six verde of Justinian; in the middle of the garantique columns carrying the roof; den to the east of the former rooms, above the marble lining were mosaics and nearly opposite, was a garden



PERSPECTIVE OF VAULTS ON PENDENTIVES AND PIERS.

pavilion with two rooms on the curtain, hung by silver rings, called tered on the west by a silver door, the work of Constantine Porphyrogenitus. It was an octagon inclosed in a

ground-floor and two above. This the curtain of the Pantheon, or the passage Lausiacos separated the golden Pantheon only; there was another doortriclinium or throne-room from the part way into this apse to the north, comconnected with the triconque. To the municating by an irregular-shaped room west of this passage, and adjoining the with the "Passage of the Forty Saints." kitchen, is the oratory of St. Basil; As each of the apses of the throne-room to the east is the tripeton, horolo- were inclosed by curtains they formed gion, or vestibule to the throne-room. separate rooms. One was used as the The Patriarch waited in the tripeton vestry of the Patriarch. The other was while he was being announced to the the entrance to the Emperor's private Emperor. The throne-room was en- apartment; when the Emperor gave a grand banquet the musicians were here. The other apse was called that of St. Theodore, and was used as the robingsquare, its interior is not unlike St. room of the Emperor; at the back of Vitale in plan: on each of its eight it was the oratory of St. Theodore, sides were apses; above the arches of the Emperor's robes, his crown, his the apses was an entablature whose arms, two shields of enameled gold, projecting cornice formed a circular and all the arms and insignia of office gallery round the hall used on grand of the head officers of state were kept occasions by the Empress and her here; another apse had a silver door ladies; the dome, which rose from the of two leaves, which led to the Heliback of this, had sixteen windows. acon of the lighthouse; this apse had The west apse formed the entrance, a picture in mosaic of Christ on his and its front was covered by a purple throne, to which the Emperor prayed

on entering or retiring, and in this apse or flutes, I presume; in all this work

cating with the dining-room of the cupola has been ornamented with most cenourgion, and it is supposed that the beautiful mosaics, representing the Empress and her court went into the orderer of the work, enthroned in the gallery on great occasions. Another midst of the generals who had shared apse communicated with the "Gallery the fatigues of his campaigns; these of the Forty Saints." There is a present him the cities he has taken as place supposed to have held the an offering; immediately above, on the porter of the Sacred Palace, and, vault, are reproduced the herculean when he was absent, the keys of the feats of arms of the Emperor, his great palace; the pavement was designed in works for the happiness of his subjects, the tenth century by Constantine Por- his efforts in the field of battle, and his phyrogenitus, and seems to have been victories granted by God." To the of Opus Alexandrinum, bordered with east of this hall is a little vestibule, silver; the walls and vaults were cov- which preceded the bed-room; its ered with mosaic, and from the centre ceiling was a cupola, in which doubtof the cupola hung a huge candelabrum less were windows; the mosaics which called Polycandelon. Basil, the Mace- decorated the walls were remarkable donian, after having murdered his col- for the composition of the subjects and league and benefactor Michael the 3rd, the harmony of the colors. Constanchernæ.

was placed the imperial throne. An- variety of form has been sought as an other apse is supposed to have commu- additional pleasure for the eye. All nicated with a staircase to the gallery. the hall from the top of the columns There is another staircase communi- to the vaults, as well as to the east did not care about living in the late tine Porphyrogenitus had constructed Emperor's apartment, and had one in this vestibule a basin of porphyry, built to the south of the throne-room, surrounded by marble columns, adwhich was called the cenourgion. This mirably polished; the water-pipe was apartment afterwards became the prihidden by a silver eagle with its neck vate dwelling of the Emperors, until turned aside, and with the proud air they migrated to the palace at Bla- of a lucky hunter it held a serpent The first room of the apart- in its claws. Near by were serving ment was the Emperor's private dining-rooms, one of which had a stair-room, entered from the tripeton, which case in it, for although the thronealso communicated with an irregular room was on the ground, the ground chamber in the outer square of the sloped so rapidly to the sea that here throne-room. The makron, or long it admitted of there being a lower gallery of the bedroom, touched the story. Constantine Porphyrogenitus narthex of St. Mary of the lighthouse, has also left an account of the bedfrom which it was shut off by silver room: "The bedroom built by the doors. The narthex before mentioned Emperor Basil is a veritable masterextended across the Chapel of St. piece of art. Over the ground in the Demetrius. From the makron the middle a peacock spreads itself—a fine door into an apse of the throne- piece of mosaic. The bird of Medea is room opened. The dining-room and inclosed in a circle of Carian marble. makron must have been lit from the The streaks of this stone stand out in Constantine Porphyrogenitus such a way as to form another larger gives the following description of the circle. Outside this second circle are vast hall: "It is sustained by six- what I shall call brooks of the green teen columns, disposed at equal dis- marble of Thessaly, which spread themtances. Eight are of verde antique, selves in the direction of the four corand six of onyx, sculptured with ners of the room. In the four spaces branches of the vine, in the middle of formed by these brooks are four eagles, which all sorts of animals disport them- rendered with such truth that one could selves. The last two columns are also believe them living and ready to fly of onyx, but the artist has decorated away. The walls on all sides are them with oblique stripes; spiral reeds covered at the bottom with slabs of

glass of different colors, which repro- the four walls as far as the ceiling. their imperial robes, and with crowns symbol of our salvation." on their heads. Their children are shown round the hall, having their im- piety if he had not had his benefactor perial robes and crowns. The young murdered.

duce different sorts of flowers. Above This ceiling, which is square in shape, these is a different work, of which gold is flat. It is resplendent with gold. is the ground, which separates the orna- The cross, which gives victory, is rement of the lower part from that of the produced in green in the middle. Round upper part of the hall. One finds in the cross the stars are seen like those this part another work of mosaic on a which shine in the firmament, and there gold ground, representing the august the august Emperor, his children and orderer of the work upon his throne, and his imperial companion lift their hands the Empress Eudoxia, both clothed in towards God and towards the divine

We should give him more credit for



From "L'Art Byzantin," by O. Rayet.

BYZANTINE CUPOLA.

princes hold in their hands the books brought up. The young princesses also hold similar books. The artist has perhaps wished to make it understood that not only the male children, but those of the other sex have been initiated in the holy writings and have taken part in the teaching of Divine wisdom, and that the author of their days, although he was not able on acnevertheless wished that his offspring genitus. might be instructed, and has also deit was recorded in history. These are had a trefoiled apse. the embellishments which are seen on

The Heliacon of the Lighthouse was containing the divine precepts, in the a vast peristyle forming an atrium to practice of which they have been the Church of St. Mary of the Lighthouse and the Chapel of St. Demetrius. It had a doorway sheltered by a porch by which the Sacred Palace is left.

The Church of St. Mary of the Lighthouse, became the Imperial Chapel of the Palace after Basil the Macedonian had built the Cenourgion. The main door of the church was of ivory. In the church was kept an enameled count of the vicissitudes of his life to crown of gold and a great cross, the addict himself early to literature, has handiwork of Constantine Porphyro-

In the Chapel of St. Demetrius an sired that the fact might be patent to enameled image of the Virgin was kept all through this painting, even though near the entrance door. The chapel

Near by was the lighthouse. In Asia,

another lighthouse, and there were a chapel built in one of the towers of the succession of them up to the confines wall, dedicated to St. Peter, and to it of Cilicia. By their means intelligence was annexed an oratory dedicated to could be conveyed to the Emperor of the Chief of the Heavenly Host; above the incursions of the Saracens. Poly- this was an oratory dedicated to the bius describes the way of signaling by Mother of God. means of lights (Polybius, Lib. 10,

cap. 43-47).

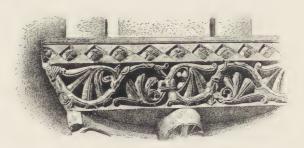
siacos; the south end of this abuts peror's baths. I may here menon the Triclinium of Justinian III.; tion that the Porphyry Palace this was commonly called the Jus- lies to the south on the shores of the tinianos. about 70 feet wide and 336 feet long, north and south meridian of Sta. Sophia running westwards; it was occasionally when prolonged southwards. It was a used for banquets, but more generally small square palace with a pyramidal for properly arranging the persons or roof; its walls were wholly covered bodies that were going in processions with slabs of porphyry brought from to the Emperor; its west end abutted Rome, and the floors were also paved on a vast vestibule called Scylla, with porphyry. This palace must have one of the entrances from without to been dismal, and one would think not the Sacred Palace; from the north side calculated to promote the health of the of this vestibule there was a door imperial scions. On the approach of the exterior gallery of Marcian. At of the Saviour complete the building.

on the other side of the Bosphorus, was the south end of the Peridromes was a

The description of the Palace is now completed, with the exception of the We must now go back to the Lan- outlying buildings, including the Em-It was a covered gallery Propontis and is nearly touched by the to the staircase and on the south winter the Empress used to assemble side another to a raised terrace, level in it the wives of the great dignitaries, with the top of the inclosing walls and present them with purple robes. of the Palace; this terrace faced the This palace was built by Constantine east side of the great Hippodrome. the Great for the use of succeeding From the end of this terrace ran Empresses during their confinement, an open passage southwards to the and those sovereigns who, like Conextremity of the hill; the lower stantine VII., were born there were part of this was called the Peridromes called Porphyrogeniti. The new Basilof Marcian; the upper part was level ica, the chapel of Elijah the Tishbite, with the terrace and was called the oratory of St. Clement, the victory

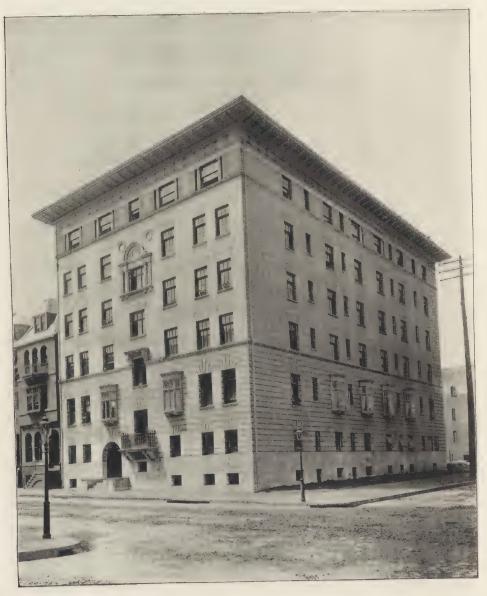
Professor Aitchison.

(TO BE CONTINUED.)





ACCEPTED DESIGN FOR BLEECKER STREET SAVINGS BANK,



Baltimore, Md.

THE ARUNDEL APARTMENT HOUSE.

Wyatt & Nölting, Architects.



CARYATIDES-"MAIL AND EXPRESS" BUILDING.

Broadway, New York City.

Carrère & Hastings, Architects, Philip Martiny, Sculptor.



UNITED CHARITIES BUILDING.

Twenty-second street and Fourth avenue, New York City. (From a water-color sketch.)

R. H. Robinson and Rowe & Baker, Architects.



ARCHITECTURAL ABERRATIONS.*

No. 5.—THE "DAILY RECORD" BUILDING, BALTIMORE, MD.



good old professor, desirous of illustrating Paley's "Evidences," produced in his class-room his own bulbous silvercased time-piece and

was beginning to argue from it the necessity of a watchmaker, when his exposition was rudely frustrated by an impertinent undergraduate who observed that he could not perceive any evidences of design about that watch.

There are a good many edifices scattered about these United States that recall this anecdote; but there are few indeed that recall it with more vividness than the building of the Baltimore Daily Record, herewith illustrated. In a watch, even the professor's, there is in fact a correlation of structure and function, and though there be architects who deny that this is essential to architecture, and others who cheerfully ignore its necessity, yet it must be admitted to be an evidence of design. The designer, if we must call him so, of the edifice now under consideration, had a very trying problem, for he was required to compose a building six stories high on a corner lot sixteen feet wide by something like five times that depth. This is a misfortune that most architects would try

is related that a of the narrow front through emphasizing its very inadequate breadth, and dissembling, so far as might be, its very disproportionate height. A single opening at the centre in each story would have left a tolerable pier on each side, and emphatic horizontal lines might have "kept it down" into respectability. notion of cutting such a front into two vertical slices is one that would have occurred to few architects but the one who has not only had but executed this conception. He has, in effect, made two buildings instead of one, in his sixteen This seems in itself a sufficient feet. protection against breadth, but it did not so appear to the designer, for in the wall that is left after the corner tower has been taken off, he has not only introduced no horizontal lines between the groundstory and the attic, but he has actually constructed a single opening at the centre running through four stories so as still further to exaggerate the height of the wall. The sacrifice of the front is made, of course, for the benefit of the tower at the angle, and what an object that is for which to make sacrifices! It will be agreed in the illustration to be an awful monument. The notion of erecting a tower of these dimensions and proportions over an opening, carrying it above the roof, and crowning it with an acute "extinguisher," so as to leave no to mitigate by making the very utmost room for doubt that what is in fact a

^{*} We are making a collection of "Aberrations," and shall present one to our readers in each number of THE ARCHITECTURAL RECORD.



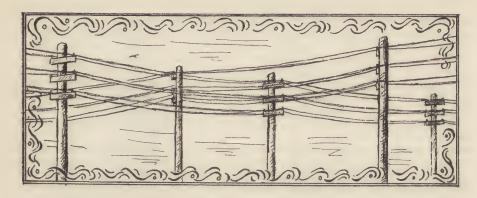
THE "DAILY RECORD" BUILDING, BALTIMORE.

possible to conceive.

able. The unit of the composition here, building. it will be perceived, is a three-story bayways, two to each flight, of different sizes cultivated community.

polygonal sash-frame is intended to be and different shapes and different treatregarded as a tower is, as it was meant ment. The force of lop-sidedness can to be, "original." It is necessary to no further go. But except lop-sidedadd that the illustration does not do full ness it is difficult to tell what object the justice to the iniquity of this monument. designer proposed to himself, or to detect The entire fatuity of the detail can, in- in his work anything like the amount of deed, be appreciated, but not the fact design that is revealed by even an oldthat not only the sash-frame proper, or fashioned bull's-eye watch. How a tower improper, but also actually the draughtsman can have endured to look heavy-looking pediment at the base, is at either of these elevations, while it was made of wood, covered with galvanized yet upon a drawing-board and could have iron, and painted cream color, the wall been rubbed out, is a puzzling question, being of dull yellow brick. Anything but not so puzzling as how he can have more preposterous and vulgar it is im- given it out for execution in more or less durable brick and pine and galvan-The same aversion to symmetry that ized iron, where it cannot be rubbed out appears on the shorter front appears also except by fire or a well-directed mob. on the longer, where there was nothing So numerous are the "things" and so in the dimensions or proportions to pre- promiscuous the placing of them that vent the architect from producing a the network of telegraph wires in the quiet, respectable edifice. The obstacles foreground, which would be very annoyhere must have existed entirely in him- ing in the view of a building that had self, and they have proved insurmount- been designed, seems to belong to this

Apparently the artist was dissatisfied window in the principal wall, with a with his work only because it was not round arch over it, a perfectly plain sufficiently diversified, for he proceeded segment-headed window in the ground to add things to it. The variegation of story and a double-lintelled opening in the skyline by means of the extinguisher the attic. This is susceptible of being at the corner, the gable in the long side, developed into something good, though and the pinnacles at the outer angles, is it may be remarked that the purpose of a wonderful piece of work. The notion a bay-window is defeated when bay- of corbelling out square pinnacles is a windows are ranged so close together repulsive novelty, yet hardly so novel, that whoever looks out of the window nor yet so repulsive, as the notion of looks into his neighbor's window. How building out slabs of brick-work, carryever, if the bay-windows had been ing them through a cornice and stopping equally spaced, with a pier at each end them against the wall, in such wise as to of the wall, something like repose and show that they are quite meaningless, something like harmony might have re- and mere sacrifices to beauty. There is sulted. In fact, there is an ample pier not a piece of studied detail in the whole at one end, and there is no pier to speak building, but the badness of the things, of at the other, three bay-windows are taken singly, is not so remarkable as the huddled together and a fourth is complete lack throughout of a relation isolated, and between the group and of anything to any other thing. As an the single opening is a wonderful cenexample of the absence of design, the tral feature which is yet not central, building is really remarkable and emiconsisting of the pedimented doorway, nent among bad buildings. We are inand above it a piece of wall, formed that it is extensively admired in crowned with a gable, pierced with win- Baltimore, but we utterly refuse to credit dows following the slope of the stair- that slander upon a respectable and



CROSS-CURRENTS.

NUMBER of months ago the promise of a new art magazine came to us from Boston. That the seat of publication was to be the New England capital was at once a presumption in favor of the new venture; it would no doubt be free, we thought, from the vulgar commercialism which permeates the very stones of New York, the coarse effrontery of "popular enterprise" which whirls through most things emanating from Chicago, the unfathomable prosyness of Philadelphia. There was not only reason for hoping that it might be an art magazine that held a really serious relation to art, but the prospectus sent anticipation traveling still further. It was to be a pure shrine of art; no booths nor stalls nor tradesmen's cries around its precinctsit was, O Rara Avis! to be without advertisements of any kind, and it was, moreover, to be edited by Devotion and sustained by Love-in plainer speech, the contributors were to do their work without pay, profit or emolument of any sort. There was, no doubt, an air of impracticability about the project which should have stirred suspicion, for never, as in these days, has it been so fatal to be impracticable. The name, too, The Knight-Errant, had a ring of phantasy or remoteness (far indeed from art) about it as though springing from the arbitrary working of some notion or crotchet. These matters, however, were overlooked. It was so pleasant to anticipate the coming of a real art magazine which would deal with Art as though it were too important an affair of Life to be either a modish, whimsical plaything, as it is largely these days with the public, or a shop article for publishers to deal in.

The new publication is now in our hands; and alas! this *Knight-Errant* proves to be a luny,

Quixotic champion, to whom we might extend the courtesy of silence did it not represent an evil tendency which it is the duty of all to oppose, all who believe that Art is deeper than any single mood, be it ever so sincere, and wider than any single manifestation of the Beautiful, be that manifestation ever so complete, exquisite and enduring.

From one aspect, art is the revelation of personality; the realization of the artist's mind. But it is also the harmonious revelation of the world, all that which the individual is not-the realization of the Beautiful through the artist's mind. Now, it is from the personal phase of Art that we get the schools-Greek, Italian, French, Mediæval art, the art of the Renaissance and so forth, and our shibboleths also-Idealism, Realism, etc., and, indeed, all those divisions and parts of art which we cover with a name. Greek art is the Hellenic mind revealed in Art. 1dealism-a wider manifestation—is one phase of the human spirit realized in Art. Greek art, or Gothic art we can imagine completed: conceivably, the possibilities of either might be exhausted, the last letter of one evangel and of the other could be learned. But, Art in its impersonal, universal aspect, is something infinitely wider than the Grecian spirit or the Gothic spirit. It transcends all schools, eludes all nomenclature, stretches beyond the possibility of exact definition. Idealism does not exhaust its possibilities; Realism is not the sum of its possessions. It is the same yesterday, to-day and forever, be it revealed in the Greek Temple, the Gothic Cathedral, Raphael's paintings, Shakespeare's plays, or Beethoven's symphonies.

The conception of Art, which the Knight-Errant comes to champion, is, at the widest, a limited personal conception, in short not art, but Arthurian to feast at. The old order has changed a certain phase of art, and it happens that this phase is, we regret to say, at present too often confounded in public judgment with the greater whole of which it is but a part. So far as we can make out, the Knight-Errant stands for the resuscitated Mediævalism of recent years, which has deluded the Public into the belief that Art is, in no small part, an affair chiefly of andirons, bric-à-brac, oddity and quaintness, a matter centered in the Middle Ages, or any age other than the age of to-day, and is to be derived by us not by living our own life as completely as possible, but by reflection from old churches and gabled buildings and illuminated missiles. Say the Editors of the Knight-Errant: "Far other is this battle in the West that calls the Knight-Errant into the field, than the brave fights wherein the Knights of the Round Table fought close and fierce with the Paynim in the name of Christ; other even than that last great fight 'among the mountains by the Winter Sea,' when 'the goodliest fellowship of famous Knights' ceased, and Sir Bedivere went forth alone, and the days darkened round him and the years. It is no longer to strive against the Paynim in the Holy Land, to contend with ravening dragons, to succor forlorn ladies in distress that he is called to action; but rather to war against the Paynims of realism in art, to assail the dragon of materialism, and the fierce dragon of mammonism, to ride for the succor of forlorn hopes and the restoration of forgotten ideals." Here we have Art narrowed to a cult, with a jargon of its own; pressing away from the spiritual vernacular of the day, from the market place, the shop, the activities of the living generation, in short from the sources from which all great art-Egyptian, Grecian, Gothicsprang. From the point of view of the modern Mediævalist, it is no doubt lamentable that the crusades have given place to Cook's Tourists, that a sound but unimaginative natural history has locked up all dragons in children's story books, and that unpoetic modernism has confided the duty of succoring "forlorn ladies in distress" gathered together again, nor the dragons liberated, and as to the "ladies" I am told the of posterity at the very points where we are most say females and reduce the matter at once to the ourselves; but are not those the very points lowest common denominator) are left.

giving place to new, "lest one good custom should corrupt the world," and there is no inspiration for the newer generation in mere affection for old things.

The Knight-Errant, indeed, declares that his quest for beauty is "not to restore a fictitious and evanescent similitude of things that were;" -good words-but, nevertheless, he feels the stress of necessity "to return in a measure to that time when beauty began to fade from life," and the fact is, despite the disclaimer, the measure of the return is scarcely less than a complete retreat from the Present to the Past. "Beautiful things have disappeared," we are told, the world has "grown old and ugly," it has discredited beauty "in thought and motive, beauty in life and death until the word has become but a memory and a reproach." Is not this the complaint of the impotent or the dilettanti against their age? It is a protest against the new forces which, while they may limit the true artist, are also the only vital sources of inspiration for him. The soul of every living art is the life of the day that creates it. The artist may find himself thrown upon barren times, may find his day and generation unpropitious for great works, but he cannot transcend the conditions given to him, or create a really favorable environment for himself by a fanciful retreat into some corner of the Past. To preach the necessity of such a retreat, as the Knight-Errant does, is to misunderstand the nature of art, to overlook the prime fact in all great artistic achievement. The Greek artist was great by being so thoroughly Grecian, Grecian even in his defects and limitations; the same is true of the Gothic artist, and of the great masters of the Renaissance. The abiding achievements of Modern Times will be those wherein the vernacular of the day has been most thoroughly and naturally employed.

It is permissible, indeed, perhaps it is a healthy sign, for the artist to be dissatisfied with his age (we are not quarreling with that), but he will not despise it. He cannot get higher than upon its shoulders. Besides, what are our judgments to the police. The crusaders can never be about our own age worth? It is not improbable that our age will be greatest in the estimation species is extinct; only women (or should we intimate with it, where it is most peculiarly which it is most difficult for us to perceive? All these things and much else that accom- We know best what we are the least conscious panied them are gone. The whole Round Table of knowing. For instance, we carry the weight of Arthur is dissolved, because it was not large of our own language with less mental stress than enough for the spirit of a world greater than the a smattering of a foreign tongue. And, is not

Likewise, we may be sure it is no easy matter for us to see our own Art with the eyes of another generation. Over and over again we have learned that. Much that we ourselves admire to-day we ourselves condemn to-morrow, and we may be sure that, despite the Knight-Errant, there are beauties in this "old and ugly age" which some equally foolish fool in years to come will be calling his generation to return to against the Knight-Errant; but the case is and live by. The best thing that can happen for the art of to-day is that the sunlight of the Present shall break in upon it and illumine every nook and corner of it. If, then, flowers do not that no scattering of dead seeds from other gento delight in. -Primus.

The epithet Quixotic, which Primus fixes upon the Knight-Errant, is, we fear, not unjust. That periodical only makes itself impotent when it mounts the high horse of whereas it is very obvious that the Grecian spirit heroism. Its form, programme and temper together isolate it from the very people it wishes to influence, and if it survives at the expense of its editors and contributors it will survive chiefly as the organ of a coterie. Far from being the chamthe picturesque but foolish victim of a very common and commonplace delusion; it is mistaking steam engines for dragons and wind-mills for giants. What is called modern materialism is not a devouring, consuming monster, it is a prodigious Power that is just beginning to stir the with all its drawbacks it is distinctly a humanizing influence. Like other Powers it is blind; but so much more does it need the assistance of them that can see. Such assistance, particularly when corrective, is sure to prove fruitful, while fruitlessness is the inevitable characteristic of mere opposition. As for the Paynims of Realism, if we may not call them wind-mills rather than giants, we may, at all events, deny them abnormal proportions and brutish nature. "The dirty drab," says George Meredith, "is the price we pay for the rose pink." Every Don Quixote has his Squire Sancho Panza. The two necessarily ride in pairs. The Knight-Errant—halfphantom as he is-is, in truth, setting out to slay another phantom-practically of his own creation, and he will never succeed, even in finding his intended victim, until he alters his manner of warfare. He must dismount from his angular steed, doff his battered armor, place his For the fragment, the individual, the beginning

a man blind to his own most individual traits? rusty sword among the antiquities in the garret and settle quietly down to make himself more at home among the realities of life. As they find their proper place in his view of things he may recognize among them his old dragons and Paynims transformed into things that are measurably helpful to men and consequently deserving of respect as well as of rebuke.

Primus has, then, something of a case stated in such a contradictory fashion that we fear his readers will be somewhat bewildered. At one moment the Knight-Errant is reproached for a "limited personal" conception of Art; and preponderate among the weeds, we may be sure the "universal impersonal" view of Art as "something infinitely wider than the Grecian erations will create for us a garden for the soul spirit or the Gothic spirit" is exhibited for admiration and approval. Moreover, according to Primus, this impersonal universal aspect of Art, while it transcends the Gothic spirit and the Grecian spirit, can not include them, for it is "the same yesterday, to-day and forever," and the Gothic spirit contain, at any rate, many elements of difference. Yet later our instructor tells us that the "soul of every living Art is in the life of the day that creates it," and "that the Greek artist was great by being so pion of forlorn hopes and forgotten ideals, it is thoroughly Grecian, Grecian even in his defects and limitations." But what, then, becomes of the universal and impersonal aspect of Art, which but a short time since was placed before us in such a favorable light? If the Greek artist is great by being so thoroughly Grecian, how can he be also great by being everything which sluggish masses into something like motion; Grecian Art is not; by sharing an aspect of Art which is the same yesterday, to-day and forever? In truth Primus here falls into a very ordinary error. He speaks of the individual in Art as one aspect of Art; and the universal in Art as another aspect of Art, whereas the individual and the universal are not aspects of Art at all; both are vital elements in the artistic spirit. Each has its place, and the place of each is different. Every work of Art is a concrete living reality, reaching out towards a reality infinitely more comprehensive than itself. It is a great mistake to place the two elements in only an external relation and call them aspects, for the wholeness of the artistic spirit is thereby shattered. "Art," says Robert Browning, "instinctive Art,"

[&]quot; Must fumble for the whole, once fixing on a part, However poor, surpass the fragment and aspire To reconstruct thereby the ultimate entire.'

share of its inexhaustible nature.

which the Knight-Errant may be useful and in the or instructors lecturing on the History of Art, at end influential. Its retreat into the Art of the Past has a certain promise of achievement because of the need which the Present has for the Past. The two should always be vitally related, and in so far as the Knight-Errant desires to affirm that of a liberal education. Art is to many wellrelationship, it is undertaking a perfectly proper, and be it added, a very much needed work. Its error consists in using the Past as a refuge from and a reproach to the Present, instead of using it as a powerful and necessary supplement to the art and life of to-day. Erroneous, then, as is its purely negative attitude towards all that is modern, it may have its place if it can only help to bring the Past somewhat nearer to us. This is the service which all reactionaries tend to perform. Thomas Carlyle condemned Industrialism and Democracy, and exhalted the Heroes of the Past -the men who had succeeded in achieving something-and whatever his condemnations were worth, he certainly did not fail to make his Cromwells and Fredericks more real, and hence more valuable to us. Ruskin is as foolishly mistaken about Materialism and Realism as is the Knight-Errant; but with all his limitations no man has done more than he to stimulate among Englishspeaking people the reverential and fruitful study of the History of Art. So we might multiply examples. Indeed, we would not be far wrong in saving that our whole modern historical movement had its beginning-not its cause-in just such a retreat into the past. The Schlegels and others of the Romantic School in Germany found contemporary ideals and opportunities as little satisfactory as does the Knight-Errant; like the Knight-Errant they, too, beat a retreat into the Past, then an almost unexplored wilderness. It was their studies, and the studies of scholars stimulated by their influence or example which first prompted the application, and finally resulted in the formulation of the historical method.

These few illustrations will indicate sufficiently in what way a periodical like the Knight-Errant may be useful. Of course we do not say that it will exert any such influence; we say only that there is work of that kind for the Knight-Errant neglected in this country. In our larger univer-

is endlessly related to the Whole-Reality itself; any course a year in that branch (which is and all that artists have ever expressed or can taken by the students as a "snap"), while it ever express will serve to suggest only a small offers two in the principles of design and delineation. Compare with such meagre opportunities Primus has also failed to point out a way in as these, the fact that there are seven professors the University of Berlin. If the large universities are weak in this department, the smaller colleges pay no attention to it whatever. The study scarcely enters into the popular conception dressed people merely a matter of spring exhibitions, a rather tiresome but indispensable incident of a European "tour," a desirable something which is to be found in the Metropolitan Museum, editorially proclaimed to be of peculiar benefit to workingmen-anything in short but the crowning glory of humanity, which a man in order fully to live must realize. We believe that lately there has been some improvement in this respect, but the improvement has not as yet gone far enough, nor has it been sufficiently popularized. Fortunately a collection is now being made that, when completed or largely completed, ought to do something to inspire a more respectful treatment of the History of Art in this country. We refer to the collection of casts, more than half completed, for the museum in New York City—a collection which, it is stated, will be, taken as a whole, more complete than that possessed by any museum in the world. In time other collections of the same kind will be made for the enrichment of museums in other cities. Chicago, for instance, with metropolitan aspirations, will not permit New York City to be ahead of her in "Art" for long; and after her rich men have thoroughly established a great university and recovered from the temperamental and financial exhaustion of a World's Fair they will scarcely fail to equip their museum with all the "Art" that history affords-if, indeed, the collection of casts now being made for the Fair will not remain permanently in that city. Boston, too, considering the amount of money that she is spending in the new Public Library building, will not be likely to be niggardly in bringing her Art Museum "up to date," and perhaps in the sacred cause of Beauty she may even in time destroy the Temple in which her treasures are housed and erect in its stead a building that does not spit at the purpose to which it is devoted.

By these means may the Knight-Errant be to perform. The History of Art is too much assisted in his self-ordained task of making the Beautiful a little more real to the Present. It is sities comparatively little attention is paid to it. less, however, to the Knight-Errant than to the Harvard, for instances, offers only one element- universities that we look for bringing to pass

this result. Hitherto they have been spending their available funds principally in equipping themselves with the expensive laboratories and apparatus needed for the scientific department, and this is natural, for in an industrial community the claims of useful knowledge are irresistible. The time is coming, however, when they will be obliged to spend money more liberfor such instruction on the part of the students. in many of the more important universities and the opportunities for studying principles of con-Art. When the time does come for the universiconsidered as a transition and a growth, the collections of casts already referred to will be of the greatest assistance. It will not be necessary for every university to have its own collection, provided the cities wherein they are situated possess well-stored museums; and undoubtedly it is the absence of such museums at the present time which helps to make the universities of the country so backward in the matter of Art courses. Museums and galleries, are, of course, intended principally for the public; but they will always be of most use to students-not merely to copyists, but to students of culture. To read the newspapers one might imagine that the daylaborers particularly delight to wander in pensive observation past painting and statue; in truth, however, while every opportunity of entering the museum should be offered to the poorest and the meanest, it is not the day-laborer that is materially benefited by what is displayed therein. Above all objects of study, Art demands a qualified medium; it can convey a vital meaning only to educated adults.

"And what do they gain?" some, perhaps, may ask. Well! they gain for one thing the advantage of living at the end of the nineteenth century. People who lack culture, who have failed either from want of opportunity or from want of desire to study literature and art fruitfully may obtain the benefit of centuries of progress in their physical lives and in the laws and ally in improving their Art courses. Not only institutions of their country, but spiritually they will large sums be left to them specifically for will be in a measure barbarian. They will have this purpose, but there will be more demand failed to transcend their individual limitations and the limitations of their time; they will have failed The increased interest in architecture has already to incorporate in their own being, spirit of their spirit, all the momentous, healing, leavening, colleges been recognized by an enlargement of abiding experience of their race. "What from thy fathers thou dost inherit," says Goethe, "be struction, and to a less extent the history of that sure thou earn it, that so it may become thine own." Let no man flout or scorn such a purifities to enlarge the number of their courses in Art cation and enlargement. We are not recommending culture for its own sake, because culture is only part of life, and will not serve to develop all the possessions of the spirit. But how sweet, how compensating it is! By means of it the many that are born with little may come into much, may take their humbler places beside them that are gifted. We are frequently reminded that observation does not make up for insight, nor any accumulation for constructive imagination. Neither it does. But we must not confuse these truths with untruths that are frequently deduced from them. Observation cannot displace insight, but insight cannot dispense with observation. The methods of seeking Reality are different, but the end is the same. He who steadfastly, hospitably, patiently, and humbly tries to make the best experience of mankind his own cannot perhaps compass Heaven and Earth, as can one who is gifted; but by placing himself as completely as possible in relation to the best Humanity has thought and felt, he has surely paid his tribute of self-sacrifice and fulfilled his mission of self-realization.

-The Editor.

Architectural Studies by Henry P. Kirby. Boston: Bates, Kimball & Guild.

Colonial Architecture of Maryland, Pennsylvania and Virginia. Fifty plates photographed and arranged under the direction of Joseph Everett Chandler. Boston: Bates, Kimball & Guild.

Egypt. Three essays on the History, Religion and Art of Ancient Egypt. Martin Brimmer. Boston: Houghton, Mifflin & Co.

Vignola. Seventy-two plates, composed, drawn and arranged by J. A. Leveil. Boston: Bates, Kimball & Guild.

Details of Decorative Sculpture, Italian Renaissance, Boston: Bates, Kimball & Guild.

History of Art. William Henry Goodyear. Illustrated. New York: A. S. Barnes & Co.

History, Principles and Practice of Symbolism in Christian Art. F. Edward Hulme, F. L. S., F. S. A. New York: Macmillan & Co.

L'Art et La Nature. Victor Cherbuliez. Paris : Libraire Hachette et Cie.

Safe Building. A treatise giving in the simplest form possible the practical and theoretical rules and formulæ used in the construction of buildings. Louis De Coppet Berg, F. A. I. A. Boston: Ticknor & Co.

We do not believe that Mr. Kirby's reputation will receive any particular enhancement from the portfolio of drawings which he has published under the title of "Architectural Studies." Perhaps it is not intended that these sketches should be taken too seriously, and, indeed, there is more of the air of sport and whim about them than something more serious. Mr. Kirby has set his pencil aplaying in an airy region where clients and other circumscriptions to the imagination evidently are unknown, and the drawings are the This is the impression we get from a great number of the designs, although several of them, we can well believe, "have been made in connection with actual projects." Perhaps we ought not to grumble with the sketches because they possess so little variation of idea, and are mostly matters of towers and turrets and steep pitched roofs. The result, however, although often wontonly picturesque, is not always a good architectural composition. It is apparent that the author is a man of some artistic temperament, of decided poetical tendencies in things architectural, but in these drawings too many parts of the designs seem due merely to a fidgety pencil. The collection could be reduced one-half with immense advantage, and among this smaller number one might find five of sufficient meaning and import to merit some study. The remainder are of small value to the public, and we fancy of

little to Mr. Kirby, unless as preludes to more serious work or as reminiscences.

Probably we owe Mr. Chandler's excellent collection of plates to the recent revival of interest in "Old Colonial." However that may be, lovers of good architecture everywhere will welcome this publication, for, contrary to what one might expect at first thought, a very large part of the work that has come down to us from the carpenters and masons, who were the architects of Colonial times, possesses in a marked degree a delicacy, a reserve, the gentlemanly quality of distinction—the very characteristics which are perhaps most lacking in contemporary architecture. The situs of this old work was rural. It belongs to the country or, at any rate, to cities very differently conditioned from ours of to-day where building is carried on under lateral compression. Consequently any practical influence to come to us from the "revival" or "fad" belongs naturally to the suburbs and the country. And there it is at work already. Succeeding, as it does, "that absence of style called Queen Anne" it can be but salutary, not only to the beholder, but as well to the designer who had passed into a state of "incoherency" in dealing with country residences. Mr. Chandler's plates are well selected; they cover the field typically. We heartily recommend them to our readers. In size and mechanical execution they are all that can be desired, but we have to point out that the index to the plates is unfortunately not free from error.

Mr. Brimmer's three essays deal with the History, Religion and Art of Ancient Egyptindeed, in the case of that bygone civilization the three are so bound together that they cannot be treated apart. The essays, we are told, were undertaken for the self-instruction of the author during a recent journey in Egypt. They are therefore chiefly a putting in order of information acquired largely at second hand, and not new utterances on subjects which are becoming wider every year and require changes of opinion and restatements of facts. Mr. Brimmer's Essays -they cover but eighty-six pages, including the illustrations—are a very readable, clear, and in the main accurate compendium of the researches of Brugsch Bey, Maspero and others. The writer, however, keeps to elementary facts, and from the limitation of his space tells his story in outline. The essays make as excellent a textbook on Egypt as any in the market. Mechanically, the book reflects great credit upon the Riverside Press. It is a pleasure to handle it.

RAYMOND LEE.

CHAPTER IX.

DRAWING CLOSER.

ON Wednesday afternoon Ralph set out for the Bungalow. Not for a moment did he doubt that he was on his way to a conventional feast of little cakes and small conversation. He half repented that he had accepted Marian's invitation. His surprise, therefore, was great when he arrived at the Bungalow and encountered a little string of vehicles, from which two or three score of noisy, joyful children were alighting. Marian and Miss Batters were superintending the disembarkation.

"Form into line, children," piped the schoolmistress, whose life had been passed in striving (with how much success, see testimonials) to get select young ladies physically and morally "into line." The usual form of her command was "form into line, young ladies," but Miss Batters was blessed with an acute perception of the infinite difference between orphan children like these, and children whose parents were financially capable of patronizing her establishment. There was a shuffling of little feet, a fluttering of little pinafores, and a great quickening of little hearts when Miss Batters snapped "March," as though it was the velocity of the word that set the children moving, and the head of the column passed through the gates into the garden.

"Where is Clare?" asked Marian, missing some one.

"Here, Miss, here," said a 'bus driver, in a soothing tone, from his high seat. "The little 'un's fell asleep. I was waitin' till you was ready."

A small head, surely not five years old, was resting on his shoulder, and golden hair, tossed by the wind, fell down his back.

"I've got her, Miss, she's safe," he said, descending from the vehicle.

"Whoa, there, you Tom. Oh! Ah!" The 'bus driver was fat, and as he secured each foothold in the course of his descent, he uttered a word.

"There!" Both feet were now on the ground. "She's a gold 'un, isn't she, Miss?"

The man's hand passed gently over the child's hair, and he put her into Marian's arms.

"Thank you, Mr. Hardy."

"No thanks, Miss. I ain't got none, but it does 'un good once in a while to hold 'em. Whoa, you Tom."

The sound of the voices, or the change of position awakened the little girl. She looked for a second into Marian's face, smiled contentedly, pressed closer against her bosom and fell asleep again. Could trust and confidence say more? All the woman in Marian quickened at the touch. Her arms folded more tightly around the little thing. She pressed her lips against the golden head. For a moment there flashed into her eyes the light of that love which men can never quite comprehend. It is only because it has fallen upon us and lingers with us that we can marvel at it.

As Marian turned to enter the garden with the last stragglers of the little cavalcade she found Ralph by her side. He was so far from her thoughts at the moment that his appearance surprised her.

"Am I come too early?" he asked. Seeing the children, Ralph wondered whether he had not made a mistake.

"No, no; indeed, you are just in time, Mr. Winter; but, perhaps, I have misled you. These are my guests to-day"—pointing to the children whom Miss Batters had "lined" along the garden walks—"they come to me once a year. I thought perhaps you wouldn't mind helping me to entertain them. Oh! Miss Batters, do let them play anywhere, everywhere; there is nothing to spoil. Mr. Winter, if you don't..."

"Not another word, please, in that tone. I know what you would say. I do like children, I assure you, and if you will show me what I can do for you it shall be done."

"For them."

"Very well, then, for them."

"Now, children," said Miss Batters, standing general-like in front of her juvenile army, "if you will deport yourselves quietly, as becomes little girls, whose manners should always be gentle and modest, you may play about in these beautiful grounds; but be most careful that you do not harm anything."

"May we pick some flowers?" piped a shrill voice.

"Well! Indeed!" cried the head of the Select Establishment in amazement. "What is your name, child?"

Miss Batters made the demand as though the name might enable her to understand the abnormal moral condition of a child who could make such a request; and, indeed, we do expect from Polly Perkins what would surprise us in Guinevere De Lancey.

"Dear Miss Batters, let them pick them," said Marian. "Go along, children. Gather all you can and put them in a heap on the lawn."

"What, Marian, those roses!" cried Miss Batters alarmed as scores of little hands attacked the bushes and scattered the full-blown leaves to the ground.

"Yes, everything," said Marian.

"You extraordinary child!" cried the spinster; but there was something in her thin voice softer than her words.

"And who is this little one?" asked Ralph, looking at the child in Marian's arms. As he glanced upward from the child's face to Marian's, he saw it was bright with quiet exultation. Can we wonder that the happiness in the voices of the children around Marian was whispering in her heart, or that sunshine and sunshine were in the garden—one from a heaven so much higher than the other?

"This is Clare," she said buoyantly, answering Ralph. "She shall be Queen to-day, my Clare. We will crown her with white roses."

"She is your pet, eh?" asked Ralph.

"She is such a lovely child, Mr. Winter. Look at those

little white hands, and those delicate eyelids with the blue veins. Wouldn't you think the light passed through them; and her hair, doesn't it seem to hold the sunshine?"

"It is beautiful," said Ralph. "Beautiful."

"But she is so frail." Marian's voice dropped to a lower key. "I didn't think that anything so sensitive could live. You have no idea what delight can thrill through that little body. We fear whether we can keep her with us. Her heart is very weak. The only hope the doctor will give us is that she may grow out of it."

"That often happens," Ralph said, cheerfully.

"Please God," said the girl.

The garden surrounding the Bungalow was of goodly dimensions and was maintained in excellent order. The broad lawn in front of the house was perfect. The flower beds and shrubbery were almost at the fullness of their summer glory on the day when Marian's children arrived to spoil them. That very morning, Tom Hopper, the earthy old gardener whom Marian had installed at the Bungalow, with his son for assistant, surveyed the result of his toil and complacently felt that it was good.

"Ther hain't a garden in Eastchester like it," he said.

And now the old man's heart was to be broken—he regularly declared it was broken every year "when them brats came." He could not be brought to make his scheme of horticulture harmonize with Marian's philanthropy. To waste the sweat of his brow "in confusion upon a lot of horphins" was an intolerable indignity. For several years past, on the day of sacrilege, he had regularly, gloomily and reproachfully resigned his position, declaring that his heart was broken. Fragile as that organ was, Marian always succeeded in mending it the next day, and the old man would withdraw his resignation, "under protest," he said—a phrase in which he found both comfort and justification for his return upon himself.

This year, when the children rifled the rose bushes and the beds of geraniums, pinks and lavender, the old man declared, as he watched the proceedings in anger from afar, that he "would be blowed if this wasn't the last time." By apronfulls and handfulls the children gathered

flowers, sparing nothing. They heaped them in a large mound in the centre of the lawn, working like a colony of busy ants, running to and fro. Laughter and voices and the trampling of little feet were everywhere in the garden. Marian sat with little Clare in the midst of the growing mound of flowers making a garland. Ralph thought she was more radiant than the roses, as he watched her while he carried on a stiff conversation with Miss Batters. Like the gardener's, the good maiden's spirit was up in protest. Her idea of an orphan was that it was something to be repressed, religiously, of course; for the good spinster was one of those who believe that a narrow charity is a pretty broad road into heaven. Dear me! what a comfort old clothes charity is to many of us, who trade in the cheapest market in the things of Salvation as well as in more worldly commodities? Ah! that rich glow around the heart when we piously bestow an old castoff coat, or shall we say a petticoat, madam? upon some shivering brother or sister of ours, who will begrudge it to us? The junk-man would not pay very many pennies for either, whereas Heaven is an extravagant purchaser.

"Marian knows," said Miss Batters to Ralph, "that I don't approve in the least of her extravagant proceedings. If everybody acted as she does, it wouldn't be very long before

the poor were dissatisfied with their lot."

"That would be a pretty state of things," said Ralph, who couldn't resist the temptation to poke fun at the school-mistress

"Indeed, it would. Why, none of us, Mr. Winter, would be safe in our beds. It is positively sinful, this entire course of Marian's; but it is impossible to do anything with her. She is perfectly deaf to reason. Look at that little girl in her arms. She is quite unfitting it for its station in life."

"Indeed!" said Ralph. "You don't mean it?"

"I do, Mr. Winter, really I do."

"And what is its station in life?"

"Its mother is a mere washerwoman, and its father, if I may speak of such things, is, dear me! a drunkard—a drunkard," Mr. Winter."

"How terrible!" exclaimed Ralph.

"Yet, there is Marian treating that child as though it were her own flesh and blood."

"It seems she loves the child."

"Dotes on it, all because it's a sensitive little thing that loves flowers. Well, well," sighed the schoolmistress, "it's just like Marian. Everything strange attracts her."

While talking, Ralph furtively watched Marian. He had not yet fully recognized the influence which the girl was acquiring over him; for it was manifested merely in a quiet satisfaction which he felt in being in her presence. Ralph, projecting his own feelings into Marian, had come to possess a belief that she had a warm friendliness for him, that flowed out to him none the less surely because it was, at the moment, an under-current. As with heat in light, Ralph's feelings always expressed themselves in his speech and actions. A girl more self-conscious than Marian would have noticed at once Ralph's attitude toward her; but Marian's eyes were not closely enough upon herself to perceive it quickly; and her soft frankness assisted in establishing Ralph's delusion. We must add to this the fact that Ralph's was a tropical nature and his feelings, were they flowers or weeds, grew apace. He watched Marian with a glow of pleasure, as she sat on the lawn, unconscious of his observation, binding the roses together.

"This is to be a crown for my Clare," said Marian, speaking softly to the child, who sat watching her intently. The little face brightened.

"Just a minute, darling. We must put one or two more roses here yet, and then my Clare shall have it."

The child folded her hands intently in her lap.

"There is a lovely one," said Marian, taking a large tearose from the mound beside her. "We will make that the star in the crown, eh?"

The golden head nodded assent.

Marian put her nose to the flower and inhaled deeply.

"Oh, how sweet! Smell, Clare."

She held the rose to the child.

"Oh," said the child, just as Marian had said it; and the two little hands seized Marian's and the rose that was in it.

"Does Clare want that one?"

The child folded her hands across her breast with the flower between them.

"What, not put it in the crown?"

The little head was shaken for dissent, and while Marian sought for another flower the child nursed the rose and kissed it.

"Once upon a time," commenced Marian in a low voice as her fingers worked amid the wreath. The child's attention was seized at once by the sound of that irresistible Open Sesame to fairy land—old Graybeard, what would not some of us give to feel again the magic of that childhood spell. "Once upon a time, there was a little girl who had never, never seen a flower, for she lived in a great forest where none could grow, the giant trees being so greedy they took all the sunlight for themselves. But, one night a great white rose came to the little girl in a dream, and kissed her, and said it loved her. When she awoke in the morning the room was filled with so sweet a perfume that she longed to go to the rose and kiss it, and tell it she loved it ever so much, as it loved her."

The child's face was uplifted to Marian's eagerly.

"But in all that forest, oh, where could she find the rose?" Clare's face fell, and she looked sadly for a moment at the rose which now lay in her lap.

"Well," continued Marian, "this little girl went to her godmother, who was a good fairy, and told her she wanted to see the rose. And what do you think the godmother told her to do? She bade her go alone far into the dark forest, to a distant spot where the wind had smitten down one of the arms of the great trees, so that at night time the moonlight came in from Heaven and made a little silver pool. Well, the little girl set out that morning, and all day long wandered into the woods. The black night came and she was very frightened and hungry and tired before she reached the broken tree and the silver moonlight pool. The little girl searched the pool for the rose; but it was not to be seen anywhere. There was only a great ugly toad there, sitting right in the middle of the light, blinking at her with his big green eyes. The little girl was so sad she began to cry."

Little Clare, too, was downcast.

"And the big toad asked her what she was crying for; and, as she told him, she crept up to him, for she loved him because he spoke kindly to her, and stroked his back, oh so softly, for fear of hurting him. But, as soon as she touched the toad, he vanished, and on the very spot where he had been was a big white pearl. Do you know what a pearl is?"

The little head was shaken.

"It is like that in this little pin of mine; only the pearl I am speaking of was so big that the little girl was able to sit on it. But she wasn't as big as Clare is. When she left her home she was; but, the moment she touched the toad she became no bigger than the point of this little green thorn on this rose. Only the little girl didn't know she had changed. She thought she was just as big as ever. So she sat on the pearl, very, very lonely, wondering how she could get home again. Now, the Dew saw her as he came through the forest, and he built a little glassy bell around her. It was just like a bit of the rainbow, and it shut her in. The air inside the bell was sweet, like the rose she had seen in her dream, just as the air around my Clare is-you smell it, don't you?-well, that made the little girl happy, so that she sat quite still and looked out of her bell and saw the moon sail away with her long silver robe and the sun come out. And presently the sun stood high up in the sky, right over the pearl, so that the dew-bell, where the little girl was, shone like a diamond. Mr. Winter, please lend me your ring."

Ralph brought her the piece of jewelry, of which he was very proud.

"That is a diamond, Clare. See how it sparkles!"

Clare clapped her hands as Marian made the stone sparkle in the sunlight.

"Now, that is what the little girl's bell was like. But, the Sun wanted the bell, for really it was his. The Dew had only borrowed it from his great palace. So the Sun dropped down a golden chain and fastened it to the bell and began to draw it up to him. He carried the bell and the little girl in it up above the trees into the sky, so high

that the little girl couldn't see the forest as she looked down. Now, the Winds, which are always wandering about, saw the bell going up, up; and it was so bright they seized it and commenced to play with it. They swung it to and fro, on its golden cord like that (Marian swung her watch by the chain), only they made it swing, oh, so far that way and then this way, that the little girl was rocked fast asleep. High, high above the clouds, I cannot tell you how high up, there is a rocky ledge, and the Winds, boisterous in their play, blew the bell against it so that the bell broke, and the little girl was left sleeping on the ledge, on a bed of moss. When she awoke, the sky was pink like this rose, and when she looked over the ledge she could see all around her and beneath her nothing but lovely pink clouds. But behind her, where the land was, far back, stood a great palace made of gold and pearl. A wide path of flowers led to it, and the flowers whispered sweetly as the little girl passed over them to the great steps and up into the palace, which she found was bigger than all the world and filled with ever so many children whiter than any pearl. They were singing, and oh! my Clare, they were so happy."

Marian's eyes were full, her voice quivered, she folded Clare in her arms. The spirit of the story had grown too big for fairy land; it had passed into a vaster region of enchantment, which is encompassed only by angels' wings.

"And the children begged the little girl to play with them, but she wouldn't, for she had not yet found the rose. She passed through the children, on, on, till she came to a throne of gold where a great, kind King sat, and there she saw on his breast her white rose, the rose that had called her in her dreams. The little girl was so glad that she cried for joy, and the great King, when he heard her, stooped down and lifted her into his arms and kissed her, as she told him, with her head on his breast, that she loved him. For the rose was the great white heart of the King."

In spite of herself, a few tears did escape and flow down Marian's cheeks. The compass of the story, of course, was far beyond the reach of little Clare's apprehension; but, her childish imagination made use of the tale as far as it was able to, and the little thing was pleased. As to Marian,

her heart had been singing to itself as well as to the child, and she, too, was happy. Her face was radiant when she turned to Ralph.

"Mr. Winter," she said, striving for composure, "please tell the children to come here. The crown is finished, and here are the garlands, white and red ones. Which does my Clare like best, the red?"

"The white ones," said the child.

"Well, the crown is for Clare, and that is all of white roses, except the big one in the middle."

Miss Batters had captured the entire little army of children, and had imprisoned them in a corner of the garden while she explained to them where it was and how it was the bee extracted the honey. At Ralph's summons they scampered readily enough to Marian, who formed them into two wide circles, linked together with the garlands she had made. In the centre of the rings she placed little Clare, and crowned her Queen, and covered her with flowers. Then she joined hands herself with the children; and singing, they danced, circling around the child. Ralph felt his own heart beat unwontedly. The summer sunshine, the joy of the children, the new light even brighter than the sunshine, that shone in so many little pale faces, and the sweet spirit of the mistress of the garden, which was the life of all he was witnessing, moved him deeply. It threw into such sharp contrast, he thought, the very selfish and worldly activities of Posner and his "mu-sik tem-per;" his father and the great Tee palace, and the Rococo movement; his professors at Harvard and their cold pedantic aims; the Rev. Septimus Blessing and his dull sanctimony; his own weak, sensuous inactivity-ah, surely, he thought, God is here if he is anywhere, in the light and sweetness of this moment.

But, ah me! a Shadow, too, was in the garden—the Shadow at whose dark feet we all have to lay, sooner or later, every precious possession of life—our loves, our enthusiasms, our hopes—and one by one see them crushed to dust; everything, until we ourselves creep to the Conqueror, and kiss the foot, and yield ourselves to its pitiless power.

Still, the little feet danced around and around, and the little voices filled the air:

"This is the way we all go round, all go round, all go round, This is the way we all go round, early in the morning."

"Ha, ha!" cried a tall man entering the gate. "Go on; don't stop."

"Mr. Fargus!" exclaimed Marian in chorus with several others. Plainly, the visitor was well known.

"Round we go!" cried the clergyman, dropping the portmanteau he carried and joining hands with the children. "What is it? This is the way we all go round, uptedound, upte-dound"—and he sang out loudly.

The appearance of Mr. Fargus stimulated the children. Their feet quickened, and louder than ever their voices rang out. Ralph was forced to join in the chorus. Little Clare too, sang, and clapped her hands in glee. The blue eyes sparkled with joy, and the golden curls swung to and fro with the music.

"Hurrah! Hurrah!" cried the clergyman. "Hurrah for Oueen Clare!"

"This is the way we all bow down, all bow down, all bow down.

This is the way we all bow down...."

So runs the song, but the song was never finished, for the Shadow stepped into the dancing circle and it fell upon the Queen. Did the Shadow join hands and sing, too, "All bow down?" An arrow in the joy struck little Clare. Her heart stopped. With a look toward Marian, the Queen's head sunk upon her breast and she lay amid the flowers.

* * * * * * *

Little Clare was buried in the cemetery that sleeps on one of the hills overlooking Eastchester. Inexpressibly deep is the sorrow that haunts its green lawns and plots of flowers and shaded, winding pathways. The sobs of how many broken hearts linger around each white headstone? how pitiable is every indication of the struggle of affection with Death and Time, to perpetuate the loved ones? That bed of pansies fluttering in the wind like captive butterflies—she, who is beneath, loved them. "Sacred to the memory," says

an aged, tottering stone, and as we pronounce the half-obliterated name, what meaning has it now in all the world? It awakes not a single memory, stirs not a single heart. Its magic is gone. It is a dead thing. "Is not my victory complete?" cries Death in triumph. "Four short generations ago he made these hills yellow with the harvest, and gathered his children around him at evening and taught them of God. Of what use is even the stone now?" Ah, Conqueror, what can we mortals say to thee? Over our dead the angel Hope watches silently, and in her keeping are all our forgotten names.

It was the first time in Marian's life that Death had touched the deep sorrow chord of the heart, and to its vibrations every other chord now moved in sympathy. When she returned home from the cemetery, it seemed to ner, as she looked about the familiar place, that there had come a pause to her old existence, a hush to its activities. She endeavored to busy herself, but her hands were listless, and her thoughts persisted in flying away to the little grave beside which she had stood that day.

"Ashes to ashes, dust to dust," Mr. Fargus' voice filled the silence. The sun sank in the glow behind the hills. "I am the Resurrection and the Life" Marian heard, as she watched the crimson in the West fade and the twilight steal quietly over the earth. Loneliness came to her as the darkness spread over the garden, and she was glad to welcome Ralph when she saw him coming along the walk to her.

The events of the last few days had not been without a profound influence on Ralph. They had loosened somewhat, as such experiences are wont to, his touch upon his old life—the outer world whence he came into Eastchester. His sympathies and feelings became more at home with his new friends. Particularly, he felt drawn towards Marian. The spell which had been working upon him since his arrival was complete. The voice of his own heart became audible to him. "I love her," it said, and Ralph was conquered. Was it a commonplace conquest?—philo-progenitiveness taking to housekeeping—the dull, colorless, ephemeral passion which often is dignified by the name of love, or was it with Ralph a vision that had burst in upon him of

a wide charmed sea? Θαλαττα. The sea! the sea! Have not some of us felt the ringing exultation of the old Greek cry when during the weary journey through the commonplace of to-day's life we catch sight of the wide prospect of the magic waters of Romance where Love is Lord? Golden is the sunlight that dances upon that sea, the winds whisper music which tempts and yet defeats the power of song, and we know that below the horizon, whose bright light beckons us from the shore, stretches the unmeasurable world of our ideals. " Mere delusion, stuff," cries our practical friend, who believes in nothing that won't bear his own weight. Delusion! Well, good sir, what is there that is not delusion? Are your narrow commonplaces, your ledger account of Life any less of a delusion than our romances and ideals. The final hunger of the Last Man dying will be for an ideal. The human race is only to be saved from mockery by the truth of its dreams. As to Ralph-well, we shall see. Love at the very first is always a trifle afraid of its own shadow.

"I am glad vou are come," said Marian.

"Are you?" asked Ralph. He held her hand for a moment longer than usual. "Mrs. Carrol has gone to the Cathedral with Mr. Carrol, and, as she thought you might like to come too, she asked me to call for you."

"Both of you are very kind," said Marian. Ralph noticed the sadness in her voice. He would like to have tried to cheer her, but he felt the effort would be vain and that

silence was best.

As they entered the Cathedral Close, they could hear the organ rolling forth like a solemn evening prayer. Mr. Carrol had left the north door ajar for them. Entering the building, its darker twilight, deeper shadows and stiller atmosphere constrained them almost to a sudden pause. The great aspiring piers and spreading arches, the high, shadowy roof, the silent tombs, the ghost-like statues of the dead of many centuries, the mystic distances along the nave and aisles, faintly lit by the pale flush of the vast stained-glass windows, all was instinct with, and indeed seemed bound together by, a solemn, sanctified peace. It stole in upon the heart, made it, too, one with the building, so that

it was as though for a time it beat within a larger frame, to the murmur of prayers, the echoes of chants, the whisper of sacred hopes; for surely every wandering footstep, every beating heart, every uplifted voice that had ever been within the building lingered in the spirit of the place.

Themselves like shadows, Ralph and Marian stole into the organ-loft and took a seat beside Mrs. Carrol without speaking a word, in order not to interrupt the old organist. No one could be more sensitive than Ralph to the influences of such a moment and such surroundings. Old Mr. Carrol's musical ideas were commonplace enough, and his power of expression limited. Yet, despite the deficiencies, his playing set chord after chord in Ralph's heart sympathetically vibrating until, for the younger man, the air was ringing with melodies and vast harmonies to which the old organist was deaf. Marian's feelings, too, against which she had been struggling all day, were heightened by the moment.

After a while, the organist ceased playing, and sat irresolute.

"Let Mr. Winter play something, Mr. Carrol," Marian whispered.

Without a word, the old man arose and gave Ralph his seat. No moment so attuned to every aspiration and feeling had ever come to Ralph before. It seemed to him as he glanced upward that the pipes of the vast organ were huge golden bars imprisoning a great spirit. His fingers tingled for a full touch of the keys; and when they descended on the board the whole soul of the man went forth in the triumphant roll of the organ that burst forth like a cry and echoed with a hundred voices. The spell that had bound Marian all day was broken—the pentup tears were liberated. Ralph has never had any idea of what he played that evening; whatever it was, it was completely transfused by his own passion and was a perfect expression of his feelings.

The first outburst of the organ had scarcely died away, the music had just sunk into a softer strain, when our friends in the organ-loft were startled by the uprising of a voice from the darkness below them. It was so clear and

sweet, so perfectly attuned, in spirit as in tone, to the music, that it didn't break in upon Ralph as an interruption, but, as another and subtler inspiration and impulse for him to bear along. The first sound of the voice thrilled Marian like a lonely cry in the twilight. It was instinct with her own sadness and longing for comfort. It was what the organ tones were not-it was human. Instantly, Ralph felt that he and the singer were one, their hearts beating in the same rhythm, throb for throb. From height to height the inspiration carried Ralph, but high as he might go, he could gain no mastery over the voice. The ecstacy of the moment was such as Ralph had never experienced before. entire nature was at the pinnacle of exultation; it cried in triumph through the music. He liberated the whole power of the organ, the gloomy air of the Cathedral seeming to tremble under the power and passion of the song. Higher and higher the music rose, but from height to height the voice of the singer mounted easily with it. Only once in a hundred lifetimes do these full moments come; but they, too, pass away as all things pass away, and as Ralph ceased playing his very soul lingered with the last echoes as they died in the vast building.

"Brother," cried Ralph, excitedly, as he arose from the organ, "you have been with me where I shall never be again."

"Who is it?" asked Marian, almost as deeply stirred as Winter.

Ralph hurried down from the loft, making his way as fast as he could in the dimness, which had deepened apace. He caught sight of somebody like a shadow hurrying for the open door at the end of the transept. He reached it barely in time to intercept the singer, who pushed past him without a pause out into the Close.

"Who are you, friend?" asked Ralph.

"God knows." The bitterness of the reply startled Ralph. Before he could speak again, the stranger, whoever he was, was gone.

CHAPTER X.

BUT ONE STEP MORE.

A FEW days after the events recorded in the last chapter, Mr. Pilgrim found it necessary to visit London in search of material needed for the "great history." That gentleman frequently found the thread of his narrative tangled with his facts, and to straighten matters out usually had to hurry off to the metropolis to explore the libraries or purchase a small wagon load of books.

Mrs. Carrol had divined the state of Ralph's feelings for Marian. One evening she hinted playfully that she feared "somebody" was planning to rob her of her "treasure." Ralph was quite willing to make a confidante of the old lady. He frankly confessed his "presumption," declared that Marian was the perfection of womankind, and acknowledged that his heart, inadequate as that very inferior article was, had been completely given to her. Of course, Ralph made his confession in perfervid language, which we spare the reader because it adds nothing to the fact.

The open acknowledgment of his sentiments gave Ralph somewhat the feeling of being formally established in his position, particularly as the old lady said, at the close of his declaration:

"I would like to see Marian married. I think it would be a good thing for her. But, you must see, Mr. Winter, her thoughts, so far, have run little in that direction; not that it signifies anything, for girls that marry soonest are very often those who have determined never, never to wed. Marian is tied, however, to what she regards as her work, and I am inclined to think she will not yield easily or without a struggle with herself. You must be discreet, Mr. Winter, and very patient."

The old lady emphasized the last words significantly. When Ralph thanked her for her advice she said perhaps she could help him. She would see.

Probably Mrs. Carrol was carrying out part of her scheme of assistance when she insisted that Marian should stay with her while Mr. Pilgrim was away in London. As the old lady seemed so bent upon having her way Marian kissed her and consented. There was one room in the organist's home which no one but Marian was ever allowed to occupy—the room which had belonged to the old couple's daughter.

Mr. Pilgrim was in London for nearly two weeks, and during that time, naturally, Marian saw a great deal of Ralph, although she spent the greater part of the day at her schools at Smeltham. She was driven to them early every morning, returning home in the afternoon; but in the evenings she strolled with Ralph and Mrs. Carrol through the lanes and roads of Eastchester and the country around, or sat in the parlor listening to Ralph who, at times, played without interruption even by so much as a word until the evening was far spent. In this way the acquaintance between Ralph and Marian passed into a familiar friendliness which naturally was very delightful to Ralph. His exaggerated attitudes, his over-strung admiration of admirable things, his sweeping denunciations of what displeased him, his fierce, fighting opinions, quietly amused Marian, who had a gentle sense of humor which was always wide awake. But she perceived behind the exaggeration a certain stable earnestness which she admired. She told Mrs. Carrol she thought Mr. Winter a very interesting man, a statement which drew from the old ladv:

"Yes, dear, I find he improves very much, the more one gets to know him."

These quiet evenings were the pleasantest in Ralph's life. It seemed to him he was on the very brink of complete happiness, merely abstaining for a brief time from seizing the bliss that, after all, was really his. The self-repression he felt he was exercising possessed a sort of subtle ascetic sensuousness which I think is ofttimes even more delightful than complete enjoyment; for appetite therein is ever keen, and imagination never sated. There was not a discord in those peaceful days. They

were of the kind that bring sunshine into Memory forever.

The Egotist is seldom very far away from the lover. When the Princess arrives we hasten to don our most becoming clothes, for the inner man as well as the outer; and, from the real King downwards, who can wear his "best" without posing? Old Mr. Tuck, of Tuck & Bias, the Fifth avenue tailors, is of a philosophic turn of mind, and has a very interesting work, still unfortunately in manuscript, treating of the beneficial effect of clothes upon the physical and moral man. He is courteous enough to read it, in parts, to certain of his customers; and I must declare, even at the expense of being, by the uncharitable, suspected of disingenuousness in revealing the fact, that I was deeply interested by his account of how many cases of physical and moral slovcured by frequent he had the individual's wardrobe. fine clothes to attired himself in his spiritual "best" for Marian; and if we, who know him too well to be deceived, find him posing a little at times, we mustn't be surprised or think very badly of him. The world is forever trying to draw men's characters with straight lines. The feat is as impossible as to depict their faces in straight lines. If the portraiture is to be truthful, the lines must cross and curve and blend and loose themselves in one another. only are men not good or bad, but I am half inclined to think it may be said that every excellence and every defect of character must have its reverse side; at any rate, in the present condition of human nature it usually has. The kind, loving, charitable heart lacks moral firmness with others and shuns dealing sternly and righteously with a brother's failings and weakness. The clear, strong intellectual vision, like a perfect lens, is achromatic, deficient in poetic color. The busy worker is a poor dreamer (and the dreamer, too, has a place in the world, though a despised one these days). The keen touch for actualities, lacks the forward feeling for possibilities, generosity tends to become a spendthrift, and Justice cannot forgive.

After the garden party, Ralph had a strong desire to visit

Marian's school at Smeltham, so one morning our two friends arranged to walk over the hills to the manufacturing town which was some five miles distant. The Marl, as it flows through Eastchester, is a slumberous stream. It meanders among the hills as though it loved the way. It is navigable to an extent even further up than Eastchester, and cumbersome, barge-like boats can be seen at times creeping up through the hop fields and corn fields to the old Cathedral town, laden with coal or some such bulky commodity. The road from Eastchester to Smeltham keeps, as it were, within elbow touch of the river on its way, and it was along it that Ralph and Marian set out. The summer was in its fullness; fields and gardens and hedges and trees were all at the height of their glory. Like a true wanderer, who doesn't count his steps, but seeks rather a direction to travel in than a destination to reach, the Smeltham road meandered. like its companion, the River, between the hills, past old farmhouses and residences, often only the roofs of which were visible among the trees. The weather the day before had been stormy, but now the sun was triumphant and a brisk, fresh breeze was driving huge fleecy clouds across the blue sky like remnants of a retreating army. Ralph and Marian had to breast the wind, which was so strong that it impeded progress. On the hill tops our two friends had to bend forward to meet it.

"Oh, isn't this exhilarating?" cried Ralph, loudly, for the breeze whirred in his ears.

"Yes, delightful," cried Marian, busy trying to keep her hat in position and wayward locks of hair out of her eyes.

"Grand," said Ralph. "This is the weather I like. It stirs a fellow to motion. We get so little of it in America. Do you know, Miss Marian, I'm getting to like the English climate."

"For a good American," said Marian, "I'm afraid you are getting to find too many charms in England."

The words went further than Marian dreamed of. Ralph looked at her for a moment.

"Yes," he said, "I'm in love with a great many things in England."

"We'll make a monarchist of you yet, Mr. Winter."

"I wouldn't object a bit, if I could choose my own kingdom."

"What kingdom would your Republicanship select?"

"The United Kingdom of course," Ralph said, smiling at the double-sided conversation.

"You couldn't make a better choice, Mr. Winter."

"I am certain I couldn't."

"I shall have to tell the Dean of this and your—friend, Mr. Kneesman." Marian laughed; Ralph laughed, too.

"Oh, wait 'till I'm King."

"You are being naturalized very quickly, Mr. Winter. How long have you been in England?"

Ralph told her.

"And nearly two years in Germany. You must long to be home again?"

"On some accounts, yes; but I haven't accomplished yet what I left home for."

"May I ask what it was? You have never told me?"

"Certainly," said Ralph; "but to make matters plain I must tell you a little more than you ask. Do you care to hear?"

"Indeed, I do," said Marian, earnestly.

"Well, then," began Ralph, and the Egotist drew a picture of his life, the perspective at least of which was quite subjective. Certainly no one else would have viewed his life exactly as Ralph did, nor would any one else have made the central figure quite so interesting. That is to be expected however. Every man's account of his own misfortunes, failings or disappointments is largely a story of how he was sinned against or defeated in his good intentions by somebody else. The successes of our lives are wholly our own; it is our failings that we share in so liberal a way with others.

"A useless life," said Ralph, in conclusion, with disingenuous frankness. "I wonder what is yet to come of it."

"Great things, I hope," said Marian.

"Do you really?"

"Of course I do."

"It would help me, Miss Pilgrim, I think, if I felt I had to justify your good opinion of me."

How excellent an opportunity, fair reader, for a little sentimental byplay! How easy to drop a handkerchief to the mock knight! Perhaps he may pick it up and really treasure it, but pshaw! what matters it if he does not; cambric is cheap. But Marian was not given to playing sentiment. We may divide mankind into two classes; those who say more than they mean, and those who mean more than they say. Of the former was Ralph's, and his speech sounded weak and false to Marian. Character, she thought, should stand firmly on its own feet, and not morally be a dependent upon anybody else.

"You don't mean that, Mr. Winter, I know. I am sure you don't need any such silly help as that to do your part in the world. You have your duty to fulfill, not an opinion

of mine to justify."

Ralph winced.

"Duty! Miss Pilgrim. With a man duty, in the large sense usually is his ambition. I wish somebody would show me what my duty is. I mean beyond merely pointing to the general moralities. Duty! Pshaw, it's as much a Will-o'-the-Wisp as anything else we run after. Now it's here and now it's there."

"May not the instability be in yourself, Mr. Winter."

Ralph admitted the possibility.

"I think it is you that are unstable. You have the artist's temperament, Mr. Winter, you are selfish." The last word was uttered emphatically. This vigorous pushing home of criticism wasn't pleasant to Ralph.

"Selfish!" he repeated, awkwardly. "Well, I suppose I am; few of us are as generous either in word or deed as we

should be."

"Are you trying to hit me?" Mr. Winter. "By selfish, I do not mean that your hand or your purse is closed. Perhaps selfish is not the word I should use. By selfish, I mean you are the centre of your own life; you are your own life; you rest in yourself. A few minutes ago you said your life had brought you few satisfactions, that even these were fleeting and disappointing; that unhappiness was the under-current of your existence. That is natural. What reason have you for expecting anything else?"

"And why not?".

"Because he who seeketh his life shall lose it."

"Texts, texts, Miss Marian. To order one's life by texts and expect to make anything of it is about as hopeless as—as—well, trying to run a locomotive with paper."

"Ought we to reject the truth because it is given to us in a text?"

"No, no! not if it is the truth, of course."

"Ah, Mr. Winter, it is the truth that I tell you. Your own career should testify that to you. You have been a seeker from the first of your own life and you acknowledge that you have realized nothing, not even from your music, your last and fullest search for yourself."

"But wait," said Ralph, significantly.

"Ah, wait! Time will make no difference; the hundredth experiment will be as the first. There is nothing in your music to save you. It is a degraded thing at best, Mr. Winter; a noble gift which you are using as the servant of a narrow personal gratification, something that in a way whistles your moods and then bows to you and says: 'Oh, Mr. Winter, how admirable you are.'"

Despite the earnestness of the girl, Ralph could not refrain from smiling. At the same time her words had gone home and were whispering uncomfortably in Ralph's inmost soul.

"No wonder, Mr. Winter, you do not believe in Christ. I see it all now. We must understand the Christian life first before we can understand Christ, who is the sum of it all. Beyond Christ is God, and with God is immortality and all that we hope for, but only dimly comprehend."

Ralph was silenced. Marian waited for him to speak.

"Surely," said Ralph, "Faith is the only road to Christ; and, believe me, I am not perverse. I cannot find Faith. Faith is a matter quite beyond our control. It is something given to us. Am I not right?"

"Not quite, Mr. Winter, I think. I believe it is possible to build up our faith in the Christian life little by little, until at last we reach Christ through it."

"Proceed experimentally; construct our Faith, as it were, scientifically?"

Marian objected to the phraseology. Science was

scarcely more than a name with her of something reputed to be very disturbing to Faith, and consequently to be feared. However, she answered "Yes." Neither spoke for a moment.

"How would you advise one to proceed?" asked Ralph.
Marian was looking over the hills, half lost in thought.
Her eyes lit with anticipation when she heard his question.

"Do you mean it?" she asked, turning to him.

"Yes," answered Ralph, half in earnest.

"That is good, Mr. Winter," said the girl, joyfully, and the accent of gratification pleased Ralph.

"Take any one of Christ's teachings, that very one we were speaking of a moment ago, and see if as you live for others you do not find your life happier and fuller than it has ever been."

"But may not that be a very self-seeking life, doing good in order that we may be happy ourselves?"

Marian was confused for a moment.

"That musn't be your motive, for what we are striving for is not to be selfish."

A turn of the road brought Smeltham into view before our two friends. How unlike Eastchester, this town of to-day! Factory chimnies, huddled houses, grime, smoke, din-all charm, all peace, all enchantment gone. Even the heavens could scarcely be seen through the smoke, and the fresh waters of the Marl, as the river flowed through the town, under arches and between canal banks, were polluted with acids and dyes, and the scourings and refuse of scores of factories. And for what? What had been obtained by this great sacrifice of the soul's possessions. A larger humanity? or merely a larger market, full of things? A civilization of calicoes and brass and iron goods, or greater dignity of life. Hard as it is to believe, let us hope the best; let us pray for it; let us work unceasingly for it. The cost of modern life is tremendous. It is appalling to count. It staggers the soul. On Fifth avenue, dressed in fine linen, after an excellent dinner we can be optimistic. The drowsiness of comfort is on the eyes. What magnificent homes! What elegance! What lovely children! What handsome women! How perfect the dressmaker's

art! There is millionaire Tallowfat and his wife in that handsome equipage with those really (will no one tell Tallowfat of it?) too gentlemanly-looking flunkeys. There is the Billionaire Club, where the other day, so the newspapers say, who are delighted with such things, young Maltby, the great brewer's son, called for a Cleopatra cocktail, in which a pearl that cost nearly a thousand dollars was dissolved. Who, with these indubitable evidences of the worth and greatness of our civilization, can fail, my dear sir, to be optimistic. Dare we stop to think of what lies underneath all this-the squalor and dirt and din of our factory towns and factory existence, that vast engriming of humanity that accompanies modern life, the dirty existence which the masses lead which one may almost say is founded upon the factory, and factory conditions? Among Tallowfat's 1,600 workmen I happen to know that there is one, Jenkins, a miserable bag of bones, so thin you would think he made tallow of himself every day. He has been "blessed" with four children, and the eldest is dying of consumption. They live in a close, fetid tenement house in New York, over a butcher's store in Tompkins square, one of the East Side "People's breathing places" - dusty, grass-plots, littered with paper and old trodden tin cans, where a few stunted city trees struggle for life. I happened to be passing that way some weeks ago. Knowing that the girl had had a relapse, I made my way upstairs through the smells and children to the Jenkins' apartment. "Oh, Mary is much better," said Jenkins' wife, who was "cleaning up" in a sort of tornado fashion. (Why is it the poor are always "cleaning up," ever without visible results?) "She's in the front room." I passed through the narrow, dark, shaft-lit chambers, where the night smell of the unmade beds was still quite strong, to the parlor-(Oh, the fearful machinemade furniture and chromo-pictures)-where I found Mary propped up with pillows at the window. I asked her if she was enjoying the sunshine. "Yes," she said, smiling faintly. "It's so good. It's like the country looking out here. The doctor said I oughter go to the coun-

try, but this is almost as good."

Hear this factory child, ye nymphs and dryads of stream and wood. Tompkins square! I took a peep at the "country." The whole picture was too sad for words, for at that moment it occurred to me that the Sunday previous the papers published an adjectival description of 'I allowfat's new "cottage" at Tuxedo. Why! the wines served at one of the millionaire's swell dinners would have kept Mary in the country for months. Shall we take off our hats, Reader, and hurrah for this sort of civilization, and declare that it is all right because it is not easy to prove logically that it is all wrong? Argue as we may, the heart cannot be satisfied with the spectacle of the tragic contrast between the rich and the poor-"the State in a fever," to borrow old Plato's phrase. Despite the harsher judgment of our financial sense, we turn with longing to the dream of a simpler, sweeter life.

Smeltham is noted for its tanneries, iron works and breweries. Englishmen are very proud of the town. Its manufactures go to every part of the globe, and, like Manchester, Birmingham, Sheffield, it is one of the props of Britain's "greatness." It is quite as filthy as the worst of our purely manufacturing towns, but comparisons are not necessary. It is very squalid, very dirty, very prosperous; except in the central pat it is a great huddlement of factories and workingmen's homes. Marian conducted Ralph rapidly through an entanglement of narrow, winding streets. The girl was evidently well acquainted with the way.

"Is this your route every day?" asked Ralph.

"No, except when I walk. Usually I drive to Miss Spinney's house and then walk to the school with her. Miss Spinney has charge of our little girls. We are late this morning. She leaves home at half-past eight."

After the pleasant morning tramp over the hills from Eastchester, each step of the way into Smeltham seemed to Ralph like a descent into a dreary inferno of ugliness, where creatures were confined who had committed some crime against the nobility of mankind.

"This place is enough to make one shiver," said Ralph.

"It is not very pleasant," said Marian, gravely, "but the greater part of Smeltham is no better."

"What sort of life can people possibly live in a hole like this?"

"Thousands know nothing better. They are born and live and die here."

"It's fearful," said Ralph.

"Ah! Mr. Winter, you must get beneath the surface if you really want to see what life is here."

"Poverty, drunkenness, misfortune, I suppose."

"Yes, there is that; but the worst feature of all is that so many human beings are part of these surroundings, born from them you may say. There is the school, Mr. Winter, at the end of this street."

"The low factory building on the right?"

"Yes. It was used as a small tool factory. We moved into it only a short time ago. We whitewashed it inside and out, put in new windows, and are much better housed than ever before. We were on Pitt street, the second turning from here."

The street which Marian and Ralph had just entered was only a few hundred feet long, terminating at the river. It was lined with a number of low, irregular factory buildings, brass foundries and ironworks, whence issued the din of busy hammers. The school was a structure two stories high, the upper of which was reached by an exterior flight of stairs. The passer-by would have mistaken it for a workshop, but for its clean, tidy look, and the words "Tubal School" painted in large black letters on the front wall. The legend formerly ran Tubal Iron Co., and when the repainting was done Marian let the old name stand, merely changing the latter words in accord with the new use of the building. The ground floor was a single barn-like room, the ceiling of which was supported by rough iron columns. It had been converted into a school-room, as Marian had said, by filling in the windows with glass, by whitewashing the walls and ceilings, by laying a wooden floor, and building a large brick fireplace in the place where the big forge fire had stood. Several maps and a number of framed engravings

taken from the illustrated papers decorated the walls. The window sills were filled with hardy plants. These additions, with the ranges of desks and the blackboards completed the furnishings of the room. When Marian and Ralph entered, about two hundred children, boys and girls, apparently of every possible age, from four to perhaps twelve, were standing in long rows before a harmonium which one of the teachers was playing. They were singing a simple air. The voices dropped almost to silence when it was seen that a stranger accompanied Marian. Without a word, Marian took a place with the teachers by the instrument and joined in the hymn. The sweet childish chorus rose again, though scores of little eyes were fixed on Ralph, many recognizing him as the stranger who had played with them at the Bungalow. The thrill of the music was pleasant to Ralph. It was the first agreeable sensation he had felt in Smeltham. When the song was finished Marian introduced Ralph and the teachers to one another, and afterwards asked Winter to play for the children, which he did willingly. He recalled all the childish airs he could think of, and when Marian called for the chorus the children joined in with spirit and carried Ralph along from one song to another.

"Perhaps I'm stopping the studies," said Ralph.

"No, no!" answered Marian, eagerly. "Don't stop, play on," and for nearly an hour Ralph led the school. When he ceased, he felt a glow of satisfaction, such as had not been his for many years. It was strange and very pleasant.

Marian revealed the pride and pleasure she took in the school by the quiet diligence which she exercised in showing it to Ralph, and by her delight, expressed in a half-restrained smile, at his interest or admiration. She took him to the different classes, showed him the work the scholars were doing, and to the kindergarten where Marian herself was the principal teacher. Outside, in the rear of the main building, was a long, low workshop, which had been converted into a rough refectory, furnished with tressel tables and wooden benches.

"Do you feed your children too?" asked Ralph, as he was conducted through the room.

"Yes. Many parents wouldn't see that their children attended regularly if knowledge was the only gift we had for them."

"I understand," said Ralph.

Marian then led her visitor to the floor above, by way of the exterior steps already spoken of, which were in reality little more than a substantial ladder. Here Ralph was surprised to find a more elaborate establishment than the school below. The greater part of the floor was arranged as a meeting hall—a small stage, equipped for lectures or concerts, with a reading-desk, a huge blackboard and a piano—and beyond, circle after circle of benches. Off from the hall was a reading-room quite comfortably furnished, the walls of which were lined with books all in rough canvas covers.

"And this?" asked Ralph, looking around.

"These are the Tubal Club Rooms."

"And do you manage this too?"

"Oh, no. The men, most of them the parents of the children downstairs, manage this themselves. Indeed, they manage the school as well—that is, there is a committee, four of the men, the Dean, Mr. Kneesman, and—myself."

"Why the men? Isn't the Dean and yourself and my friend, the Rev. Mr. Kneesman enough?"

"No, management is education; besides, the men know their own lives and necessities better than we do. If it wasn't for their aid we would do a great many foolish things that would thwart success. I don't think you have any idea, Mr. Winter, of how much rough wisdom and hard common sense the working people possess. Besides, they know their own wants so much better than any one else, and for practical results it doesn't do to build above the heads of people. Does it?"

"Miss Wisdom," exclaimed Ralph, laughing.

"But, am I not right?"

"Of course you are right," said Ralph. "But what are these I see?" continued he, glancing at the book shelves. "Karl Marx, Henry George, Toynbee, Bellamy, Webb, the Fabian Essays, Economics of State Socialism, Death and Disease Behind the Counter, Labor Movement in America,

Tom Mann, England for All, George Howell. Why, Miss Pilgrim, is this a revolutionary club?"

"No. It's a Workingmen's Club. Why?"

"Do you think this literature of disaffection is the proper sort of reading for working people? Have you gone through it yourself?"

"No," said Marian, quietly. "I have never read any of it." "If you had," said Ralph, "I am sure you'd banish it all."

"I don't think so, Mr. Winter."

"What, not if you disagreed with its teachings, which I am sure you would?"

"No, indeed; the workingman must develop his life from his present position; must work out his own ideas, strive for his own ideals, work on to wisdom from his own point of view. His ideas and methods may not be yours, Mr. Winter, but they are the only ideas and methods that can be real and vital to him. He cannot possess the drawing-room view of life, nor strive for drawing-room ideals by drawing-room methods."

"But suppose he is on the wrong track, as we say in America."

"He is not, Mr. Winter, despite mistakes and shortcomings. God may forsake the individual, but never the people. In the end, He will bring good out of the effort of these people for a fuller life. Besides," she added, "I have only a voice in the management here."

"But you supply the funds?"

"The Committee," said Marian, hesitating, "find what is needed."

Ralph was standing in front of the girl. He took both of her hands in his. The words were wrung from him:

"You noble girl," he cried.

It was the uplifting of a strange, worldly voice in the sanctuary. Marian blushed deeply. For a moment she bowed her head in a sort of shame. Her hands still remained in Ralph's. When she lifted her face to his it was marked with something like pain, and big tears were in her eyes. Without a word, she hurried down to the school-room. The Tempter had spoken to her, the Evil One that stands so close to the Good, so ready to whisper and desecrate.

Try as Marian might to silence Ralph's words, they would not be silenced. They sang to her with a siren sweetness. They thrilled her very being with pleasure; a deadly pleasure she felt. It was as though the nun had seen her face reflected in the Virgin's eyes and read there that she was fair. What was Eve's temptation to this one threatening the peace of Innocence of the Garden of Eden. As to Ralph, though the words were uttered quite without premeditation, reflection approved of them thoroughly. She must be pleased, he thought. Besides, they are true. He felt he had advanced one step nearer to Marian.

His admiration for the girl, however, acted reflectively. The light of her goodness revealed to himself critically his own narrow life. The Teacher was busy with him. The neophyte was getting to his knees. But was the Teacher God or Love? Ralph himself could not tell. The lesson was accompanied by a gentle feeling of elation. Ralph perceived what he regarded as the goodness of his own nature. It was like witnessing a mild apotheosis of one's self. "No common nature," he thought, "would be stirred by the admirable as I am."

Whoever was the teacher, chance visited the Tubal schools that afternoon and pressed the lesson closer home to Winter. Ralph spent the remainder of the morning in the Library, and then dined with Marian and the children. By this time his interest had pretty completely traversed Marian's little establishment, the novelty was exhausted, and he felt a sneaking desire to get away from the place. He wandered into the town through the finer business streets, and when tired of walking hired a cab to drive him about. In this way he obtained in a few hours a wide glance of Smeltham, and though the town, even at its best, lacked charm or beauty of any sort as completely as the machine-made goods it turned out in such vast quantities, it impressed Ralph, for it was after all a great living thing. The strong pulse of modern life beat in its activity, and its bustle and manifold noises whispered of multitudinous desires which had traveled by devious ways from the four quarters of the globe, and were the genii which had created the town, and day after day crept into the machinery and the very muscles of the great army of toilers, and kept all in motion. There was a grim kind of poetry in the thought for Ralph.

If modern commerce forges the chain of a dirty and prosy slavery for millions of mankind, is not the same chain also binding the world together in a brotherhood that year by year becomes closer? Who knows but that some day the iron fetters will be transmuted to gold? Turk, Russian, Australian, Indian, Chinaman, were all in a way at work with the mechanic at the Smeltham factories, and beyond the doors of the noisy buildings the imagination could see Rhenish vineyards, American cornfields, Canadian forests, strange tropical lands, busy cities under the Western sun, minarets of the Morning Land, sleeping little villages and wide seas. Ralph's unpleasant impressions of the morning were crowded from his mind by the sight of this larger vision. "Patience and Faith, Faith and Patience," an inner voice cried. "All will yet be well. God who is Love, and Beauty has not forsaken the World. But do thou thy part in Patience and with Faith."

These thoughts were at work with Ralph when he returned to the schools. The children had departed, and Marian was awaiting him.

"I didn't mean to be gone so long," he said. "I have

kept you waiting?"

"No," replied Marian, vacantly. She hesitated before saying anything more. "Mr. Winter," she recommenced, diffidently, "I have just received—a telegram—from—Mr.—Professor Dunsey. He has disappointed me."

"How so? What has he done?"

"It is what he has not done." Marian lifted her eyes to Ralph's from the paper she held in her hand. An experienced coquette could not have acted better. "Mr. Winter," she said, eagerly, "I want you to do me a great favor. Will you?"

"Indeed I will, with pleasure."

"Well, Professor Dunsey promised to lecture on Iron to the club to-night. Once a month, you know, we have a lecture. This is the first time I have undertaken to make the arrangements, and here's the result: Professor Dunsey

telegraphs that his wife has been taken very sick, and he cannot possibly leave London."

Pause.

"Well," asked Ralph, after a minute, "what can I do with the dilemma? Go to London and drag the Professor to his engagement by the hair of his learned head—if he has any?"

"No," said Marian. "It is too late for that." Then she continued, diffidently: "I want you to take the Professor's place."

"Lecture on Iron! Me?" cried Ralph, in amazement. "Why, my dear Miss Pilgrim, I couldn't tell iron from steel to save my soul from everlasting perdition. A lecture from me would be very funny. Gentlemen and—will there be any ladies? iron is a very useful metal of a black or grayish color, found, if my information is correct, in the bowels of the earth, in a great many places. It is made into pigs and sows, too, I think. It is..."

"No, no," said Marian, "I want you to take the Professor's place, not his subject."

"Oh, and?" asked Ralph.

"And," said Marian, coaxingly, "tell our people something about Music. You will be at home there."

"Yes, but my house isn't in order for company."

Marian felt she was gaining her point.

"But the visit is an informal one," she said, laughing.
"Will you come upstairs, Mr. Winter. Come along, Miss Spinney." When the trio entered the hall Marian said, "Sit down at the piano, Mr. Winter."

Ralph did as he was bidden. "Now?" he said, striking a chord.

"Your audience is before you, Professor Winter. We want you to tell us what sound is—what a musical sound is—how it differs from an unmusical sound. What is melody? what is harmony? We want you to illustrate the matters for us. We...."

"Hold! Hold!" cried Ralph. "One thing at a time, pray."

"Well, then, what is sound? What is the difference between a high or treble sound and a low or bass sound? Remember, Professor, we are very ignorant, and would take it as a favor if you will give us the simplest explanation you

possibly can. No big words."

Step by step, in this manner, Marian led Ralph along from vibrations of the air, the length of waves and strings, to the nature of musical concords and discords, the formation of chords, and the rudiments of harmony. At every point possible Marian cried: "Show us on the piano, Professor," and she got Ralph to remove the front of the piano, so that "the audience" might see. When Ralph had finished, she gravely proposed a vote of thanks for the Professor and three cheers.

"There, Mr. Winter," she said; "you see how much buried treasure you have. You will repeat that lecture for me to-night, won't you?" She put her hand on Ralph's arm. The appeal was too strong to be refused.

"I will do anything for you," said Ralph, so fervidly that Marian blushed. "But," continued Ralph, who would have given a great deal to be free from the task, "it will be no lecture, I can do no more than chat as I did with you, and I'm not sure I can do that before a crowd."

"Nothing could be better than a chat. It's the very thing."

"Will you be present to help me along with a question or suggestion in case I come to a stop anywhere?"

"To be sure. I will be with you, and so will Miss Spinney and Mr. Kneesman, and the Dean's wife ..."

"Pray stop—don't make me afraid of my audience before I face it."

The "personages" Marian had named and a few others were present when the lecture began, with one hundred and fifty workingmen of the neighborhood and their families. The Rev. Kneesman introduced Winter to his audience, alluding to him as "a great musician, really one of the greatest I have ever heard." The compliment made Ralph smile, but nevertheless it was pleasant and, of course, it raised the expectations of those present. The rows of inquisitive faces uplifted to Winter's disconcerted him at first, but little by little, as he began to speak, the inquisitive look gave place to one of interest. The illustrations on the piano

were particularly attractive, and as many of the audience seated in the rear of the hall were too distant to see the keyboard of the instrument they crowded on to the stage. Ralph soon became at home with his hearers, and then all hesitation, either of ideas or speech, vanished. "Here, Sir," he said to a tall, bony, long-armed workman who had edged up to the side of the piano, "please strike these three notes—so. You notice they are in harmony." The lankey fellow was thrown into awkward confusion by the request and endeavored to sidle away.

"Go it, Bill," cried a voice in the crowd. "He is a musicianer, mister. He's preached 'armony to us many er time."

A roar of laughter followed, amid which Ralph took hold of Bill's reluctant big, coarse fingers and tried to get them into the position to strike the chord.

When they did touch the keys there were at least six notes beneath them. Louder laughter followed the performance and "Bill" fled the stage.

"See if he can strike three five pun notes at once, mister," cried a voice.

This sally brought down the house again.

At the close of the lecture, the entire audience gathered around Winter and they kept him playing until Kneesman declared it was time for the ladies to be getting home. Then three cheers were given for Ralph, and right lusty cheers they were too, and everybody smiling voted that the evening was the "pleasantest yet."

On the way home, Marian gratefully thanked Ralph. She was delighted with his success. Her praise rang in his ears. "You don't know, Mr. Winter, how much you have been keeping to yourself."

"Such as it is, it has taken you to find it and bring any of it to the surface."

"No, Mr. Winter, you are finding yourself."

Marian gave him a warm good-night. Her hand lingered in his.

One step more, thought Ralph, when he was alone. You are an angel, my Marian, and I love you. No wonder I have been a discontented cuss. She is right, I've lived a selfish life.

The old Hildesheim dreams faded away. The future would be with Marian.

I will help her in the schools, said he; and as Ralph constructed project upon project, he became more and more pleased with himself in the role of teacher and philanthropist.

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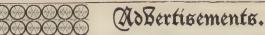
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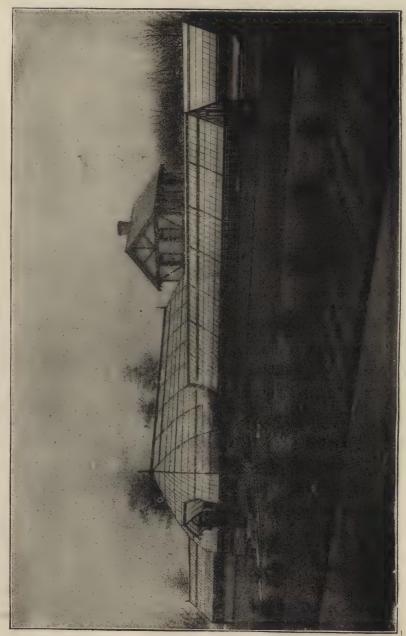


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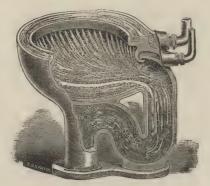




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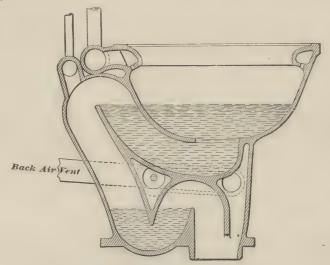


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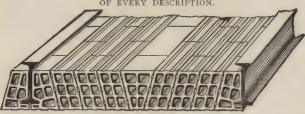
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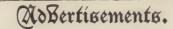
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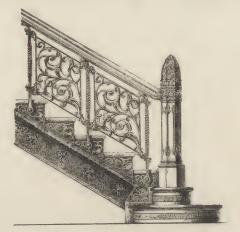




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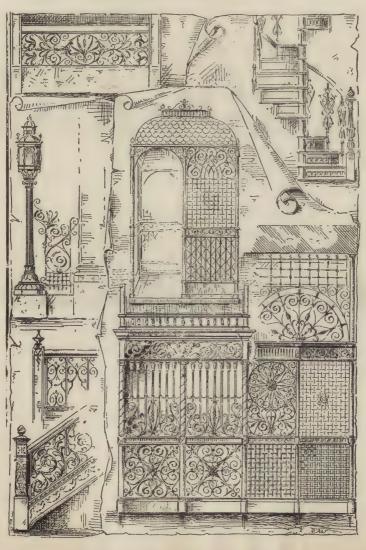
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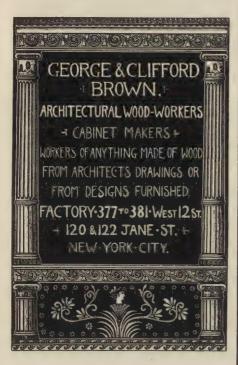
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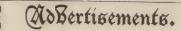
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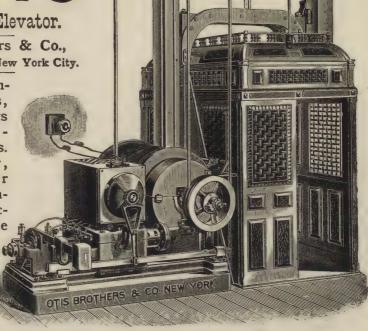
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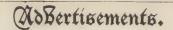
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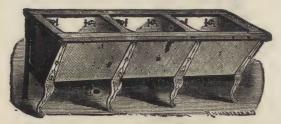
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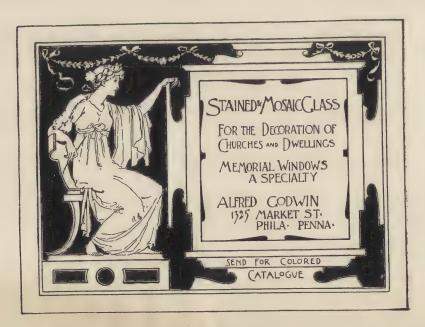
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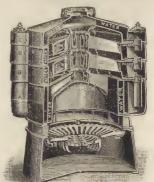


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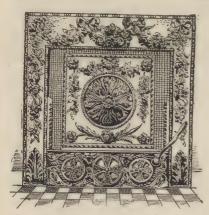


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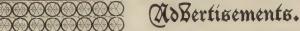
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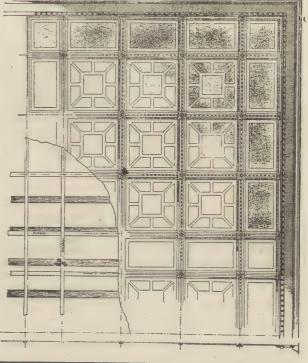
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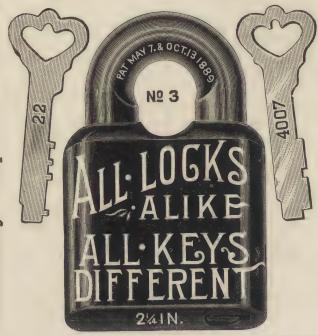
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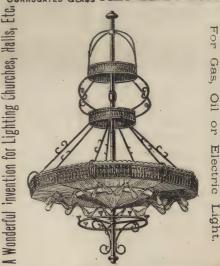
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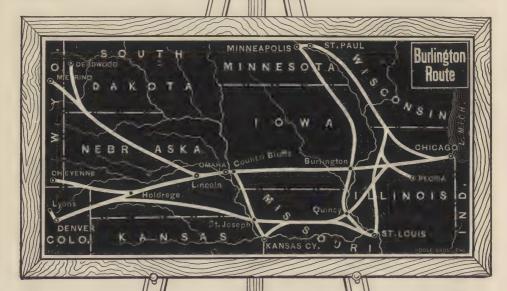
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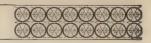
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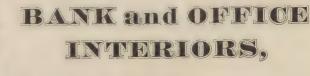
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JANUARY-MARCH, 1893.

CONTENTS.

	PAG
MOSAICS IN ST. AGNES' CHAPEL, .	Four-page Frontispiece
A SEA OF GLASS,	CARYL COLÉMAN
A HINT FOR PREPARING A COUNTRY HO	OME, 286 WM. J. FRYER, JR.
MOSAIC AS AN INDEPENDENT ART, .	ISABELLA BEBARRIERI . 291
FRENCH CATHEDRALS—No. II.,	BARR FERREE 303
THE MODERN HOUSE IN PARIS,	PAUL FRANTZ MARCOLL 324
BENJAMIN FRANKLIN'S HOUSE, PARIS.	Illustration,
ARCHITECTURAL ABERRATIONS.—No. VI ing at the World's Fair,)	I. (The Government Build-
BYZANTINE ARCHITECTURE,	PROF. AITCHISON. 337
THE RELIGIOUS ASPECT OF ARCHITECTU	
THE DAILY RECORD BUILDING OF BALT	
RAYMOND LEE.—Part VII.,	
BOOK REVIEWS,	390

ILLUSTRATIONS.

Mosaics in St. Agnes' Chapel, frontispiece; Window in Cathedral, Troja, Italy; illustrations to "Sea of Glass"—(Marriage in Cana of Galilee, 268; Window in Chartres Cathedral, 269, 271, 272, 273, 276, 277, 278, 279; Example of Flesh Painting, 270, 274; Example of Washed Shading, 274); Suggestion for Plan of Grounds, 289; Mosaics, 292; Mosaics in Church of Sta. Prudentia, 293; in Monument of Pius IX., in Church of S. Apollinare Nuovo, 295; the Baptism of St. John, Ravenna, 296; in Church of S. Vitale, 297; in Baptistery, Florence, 298; the Coronation of the Virgin, Cathedral Florence, 300; in St. John Lateran, Rome, 301; the Cathedral Frejus, 305; Cathedral, Perigueux, 307; Cathedral, Arles, 308; Doorway of, 309; Notre Dame des Doms, Avignon, 312; Interior of, 313; Cathedral of Beziers, 315; Cathedral of Agde, 316; Plans of a Paris Apartment House, 326; Exterior of a Paris Apartment House, 329; Benjamin Franklin's House, Paris, 332; the Government Building, World's Fair, Chicago, 334; Interior of Sta. Sophia, Constantinople, 337; Byzantine Capital, S. Vitale, 338, 339; Byzantine Carving in S. Apollinare Nuovo, 340.

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DUMB WAITERS,	- John Q. Maynard,	-	27
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	Morse, Williams & Co.,	-	viii
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	Guastavino Fire-proof Construction Co.,	-	41
	Pioneer Fire-proof Construction Co.,	-	11



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	Richardson & Boynton Co.,	_	_	35
	The Thatcher Furnace Co.,	-	~	35
FURNITURE,	R. J. Horner & Co.,	-	_	38
GLASS,	The Falck Art Glass Works,	-	-	30
	Alfred Godwin,	-	_	30
	Heinigke & Bowen, -	_	_	31
	The Tiffany Glass and Decoratin	g Co.,	-	31
81-	Vanhorne, Griffen & Co., -	-	-	35
HORTICULTURAL ARCHITECTS AND				
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Interior Fittings,	The Henry Dibble Co		orks,	4
THIERIOR ITITINGS,	The Henry Dibblee Co.,	,	-	37
Iron Construction,	A. H. Andrews & Co.,		-	17
TROW CONSTRUCTION,	Jackson Architectural Iron Works Hecla Iron Works.	, -	-	Cover
•	Richey, Brown & Donald.	-	-	14
	TO1 TYTE 1 TO C	-	-	15
Iron Work,	Samuel Nichols & Son, -	-	-	16
Laundry Engineers,	O-1-1 0- TZ - /*	-	-	23
	Charles R. Yandell & Co.,	-	-	38
Lumber, Mahogany, Etc.,	John R. Graham, Jr.,	-	-	23
210,,	D. C. Newell & Sons,	-	-	18
	Wm. E. Uptegrove & Bro.,	_	~	20
	Wilshaw & Co.,	-	_	19
Locks,	The Universal Lock Co.	_	_	22
	Robert C. Fisher & Co		_	33
,	Davidson's Sons Marble Co.,	-	_	38
METAL CEILINGS,	A. Northrop & Co.,	_	_	29
	H. S. Northrop,		-	40 40
MINERAL WOOL,	U. S. Mineral Wool Co.,	_		9
	Batterson, See & Eisele,	_	_	37
W1	Prince & Muir, -			36
Periodicals,	Review and Record,	_	_	36
	Architectural Record,	_	_	viii
PICTURES AND FRAMES,	J. S. Bradley, Jr.,	-	_	12
		~	_	25
PLASTER SLABS,	The Grooved Plaster Slab Mfg. C	0.,	_	39
PLUMBERS' SUPPLIES,	Henry McShane Mfg. Co.,	-	-	6
PNEUMATIC TUBE APPARATUS,	The Meteor Dispatch Co.,	-	-	41
Railings,	H. L. Judd & Co., -	_	_	17
Ranges,	Isaac A. Sheppard & Co.,	-	-	32
REAL ESTATE,	Geo. R. Read,	-	-	Cover
	Bailey Reflector Co.,	-	-	38
Roofers,	James A. Miller & Bro.,	_	-	41
ROOFING SLATE,	E. J. Johnson & Bro.,	-	-	29
Roofing (Tin),	Merchant & Co., -	-	-	II
SEATS,	Andrews-Demarest Seating Co.,	-	-	17
SHINGLE STAINS,	Dexter Bros.,	-		35
	Samuel Cabot,	-	-	34

vii



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SIEAM AND HOL WALLES	The H. B. Smith Co.,	8
	American Radiator Co.,	i
STONE	- Passaic Quarry Company,	1
TERRA COTTA	- N. Y. Architectural Terra-Cotta Co., -	42
2 DR201 October 100	Perth Amboy Terra-Cotta Co.,	42
	Stephens, Armstrong & Conkling, -	12
	Boston Terra Cotta Co. (Fiske, Homes & Co.),	13
TERRA-COTTA LUMBER, -	- Pittsburg Terra-Cotta Lumber Co., -	5
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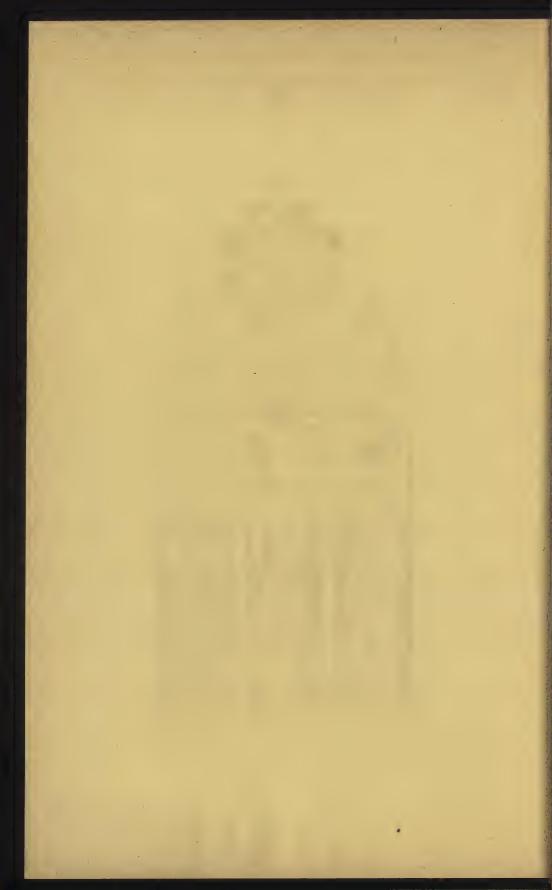
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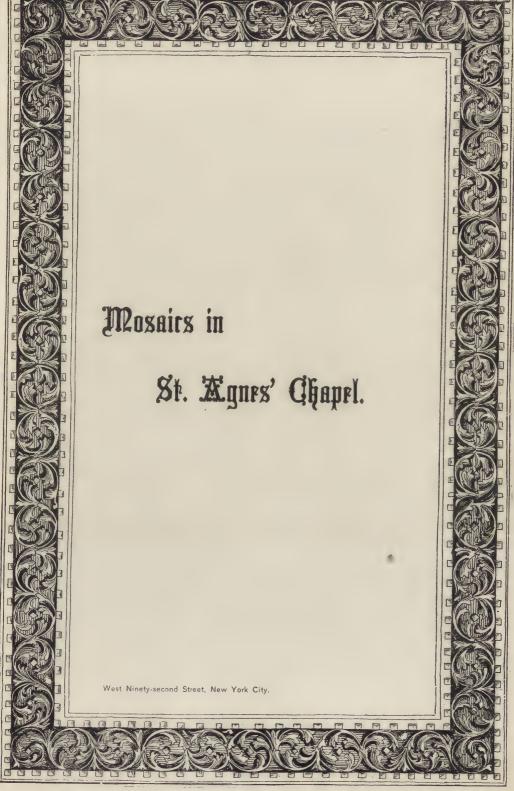
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Perforated Stone Window (originally glazed with colored glass). Cathedral, Troja, Italy.

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VOL. II.

JANUARY-MARCH, 1893.

No. 3.

"A SEA OF GLASS."



eration of artisans to another, wrote a book upon the subject, now one of the rarest books known to the bibliopole. In the first part of this book occurs the following passage: "The power of Nature is limited in all her effects, and men alone can augment and enlarge by Art the virtues and powers which she has produced." The truth of this observation is most fully illustrated in the origin, development and use of glass, a truth I hope to make clear to all my readers in the following study upon the picture windows of the past, more particularly those of the Middle Ages, which were the outcome of the faith of the people, and so numerous were they that they are fitly described by the words of Holy Writ: "And before the Throne there was a sea of glass like unto crystal."*

The English substantive glass is derived from the Anglo-Saxon verb glisnian: to shine, and is used to name a well-known vitrified substance, which for the purpose of study may be divided into two great classes, namely, natural, and artificial.

1.—Natural glass is found in various parts of the world, generally in the vicinity of volcanos. In the island of

N the latter part of Lapari there is a cavern of which the the seventeenth cen- side walls are composed entirely of this tury there lived in material; it resembles the scoria or France a worker in slag of metal furnaces, varies in color, glass by the name of is often filled with impurities, and is Blancourt, who, fear-seldom transparent. It was largely ing that the art of making colored glass used in the arts by the nations of antimight be lost, as many of the processes quity, and also by the ancient Mexicans were trade secrets, secrets handed and Peruvians; it was called by the down by word of mouth from one gen- Romans obsidian, a name probably formed from a Greek word meaning "seeing images in," a name given to this material because the black variety was used by the Egyptians, Greeks and Romans in the making of mirrors.

2.—Artificial glass is a transparent, semi-transparent or opaque substance, varying in color, made by fusing a silica with an alkali-sand is the commercial representative of the silica, and soda of the alkali, while the color is produced by mingling metal oxides with the sand.

The origin of artificial glass is unknown, and all the effects of modern times to discover it have been fruitless; it has passed from the memory of man. It is true that Pliny and other ancient authors give us a legendary account of the discovery of artificial glass which is quaintly epitomized in an old work, on the art of glass-making, printed in 1699, as follows: "We are indebted to Chance for the first invention of glass, which was made on the banks of the River Belus in Syria, where certain merchants being driven ashore in a storm were obliged for some time to stay and make fires and to dress their provisions; the place abounding with a certain herb called Kali, which by the great fires they made, being reduced to ashes full of salt, and joined with

^{*} Rev. IV., 6.

without the invention of glass."

of more importance, might supply the decay of nature and succorold age with subsidiary sight. Thus was the first artjoyment of light, enlarging the avenues use in their unique civilization. of science, and conferring the highest and the beauty to behold herself."

of artificial glass, it is undeniable that lets, etc., were exported from Egypt to the art was discovered at a very early these nations, and their fragments are period; in fact, we have a specimen of found even to-day in countless numbers dated glass now in the British Museum among the ruins, in the tombs, and bewhich was made B. C. 3064; it is an neath the soil of these countries. amulet in the form of a lion's head, As for the Romans, among amulet in the form of a lion's head, As for the Romans, among whom made of opaque blue glass, and upon glass was introduced in the year B. C. the under side there are hieroglyphics 536, they were not only importers and which give us the above date. In addi- consumers of Egyptian glass, but ultition to this evidence, the process of mately became makers; it was the only glass blowing is depicted in the paint- way they could supply the demand, for of Beni-Hassan (2851 B. C.), and in the far more than is now in use. Where sculptures upon the more ancient tomb we employ in domestic life earthen-(B. C. 3900) of Tih in the necropolis of ware they used glass; they made their Sakkara at Memphis, and glass bottles decorative vessels, their wall and floor containing red wine are represented in mosaics, their chessmen and dice, their ago.

sand and stones proper for making ferent countries of the classic world glass, which are natural and plenty seem to point toward Egypt as the thereabouts, run down into a sort of source of the art, a country in which melted glass; which showed them not there is still to be seen, at the side of only the manner of making glass, but many of the Natron lakes, the ruins of also crystal, and several other fine glass factories of the highest anthings which had not been found out tiquity, we are safe in concluding that Egypt was the mother of the art Such an accidental discovery may of glass-making, and that thence the have happened, if not just as related art was transmitted to all parts of the above, yet it is possible that "by some known world. Among the Egyptians fortuitous liquefaction was mankind themselves glass was employed in every taught to procure a body at once in a imaginable way, except for windows; it high degree solid and transparent, appeared everywhere: upon the walls which might admit the light of the sun of their buildings, upon the dresses of and exclude the violence of the wind, the people, upon many articles which which might extend the sight of the helped to furnish tombs and temples, philosopher to new ranges of existence, palaces and private houses. The mumand charm him at one time with the un- mies were adorned with necklaces, bounded extent of the material creation, flowers, beads and eyes of glass; the livand at another with the endless subordi- ing decorated their garments and pernation of animal life, and, what is yet sons with glass ornaments, kept their wine in glass bottles, ate their food from glass plates, measured the rise and fall of their sacred river with nilometers of ificer of glass employed, though without glass, and made statues of their gods his own knowledge or expectation. He in glass; in fact they blew, cast and cut was facilitating and prolonging the en- glass into thousands of objects of daily

The Phoenicians, the Assyrians, the and most lasting pleasures; he was enab- Greeks, the Etruscans, the Israelites, ling the student to contemplate nature, and the Romans received originally their glass from the Egyptians; mil-Whatever may have been the origin lions of glass objects, ornaments, amu-

ings on the walls of the rock-built tomb they employed a prodigious quantity, Egyptian paintings executed 4,000 years perfume and toilette bottles, necklaces and ornaments, cameos and gems, As the most ancient examples of toys, nick-nacks and water clocks, of glass that we have are undoubtedly of glass, and Roman ladies even used Egyptian manufacture, and moreover glass balls to keep their hands cool, the history of glass-making in the dif- changing the balls as they became heated. Propertius (B. C. 57) describes probably maugurated by the artists of

ing sixty of these balls.

as polished gems. the first to use it in windows. The panes century. they employed were usually not more made of a greenish glass; but after the advent of Christianity glass windows became larger and more common, Constantine giving an impetus to the movement by glazing the windows of the basilica of S. Paul's beyond the walls of Rome with sheets of colored glass, which Prudentius describes as varied in color and as brilliant as a field of flowers in the Spring.

In the beginning, the church builders filled their windows with slabs of marble or stone or stucco, pierced here and there in such a way as to form a pattern, glazing the perforations with colored glass. The windows of the church of S. Sophia, rebuilt by Justinian at Constantinople in year A. D. 565, were made in this way, as well as most of the windows of the churches of the first five centuries of Christianity, both in the East and the West. This usage continued in vogue in the East almost to our own time, more especially in Egypt among the Copts, where examples of this work may be seen to-day in their churches and monasteries. Italy there are a number of churches where perforated slabs (windows) still exist, but without the glass, which in the course of ages has disappeared. When the world recovered from the paralysis of all the arts, brought upon them by the iconoclastic madness of the eighth century, the architects and artists of the time turned their attention to improving the artistic beauty of church windows by lessening the in making the window opening so vast amount of tracery and by the introduc- as the great window at Tintern Abbey,

Cynthia demanding glass cooling balls the Germano-Christian school, who enfor her hands, and not long ago an ala- deavored to break away, more particubaster urn was found in Rome contain- larly during the age of Charlemagne, from the methods of the Roman-Byzan-Roman glass, like Egyptian, was tine school of art, and would have unmade in all degrees of transparency doubtedly produced in the end beautiful and translucency, from the purest of picture windows, if the development crystal to the opacity of black obsidian; had not been arrested by the popular in range of color it embraced every belief that the world was approaching shade of blue, green, red, orange, yelits end, that the year 1000 would see low, lavender, white, and many other the dreaded catastrophe-a nightmare colors; and much of it was as brilliant from which the fine arts only began to The Romans were awaken in the middle of the eleventh

Then it was that gradually the beauty than seven to ten inches square, and and inherent quality of glass as a transmitter of light and as a decorative material was brought into play through the requirements of Gothic architecture, an architecture peculiarly marked by large window openings. It called for a filling strong enough to keep out the weather, yet transparent enough to admit the light; on the other hand, as in this form of architecture the wall spaces were necessarily small, the windows

were the only places where the decorator could display his art in as far as it depended upon color.







But as glass was only to be had in small pieces the glazier was compelled, in order to fill the window openings, to make his lights a mosaic, that is, a combination of varioussized pieces of glass of various colors worked to a given design by placing them in juxtaposition, and retaining them in place by some other materials, and the best material for the purpose was found to be lead—strips of lead having lateral grooves for the reception of the edge of the glass.

As I said before, Gothic architecture, tion of figures. This departure was which measured ninety feet in height



Marriage in Cana of Galilee.—An example of late XIIIth century leading (French).

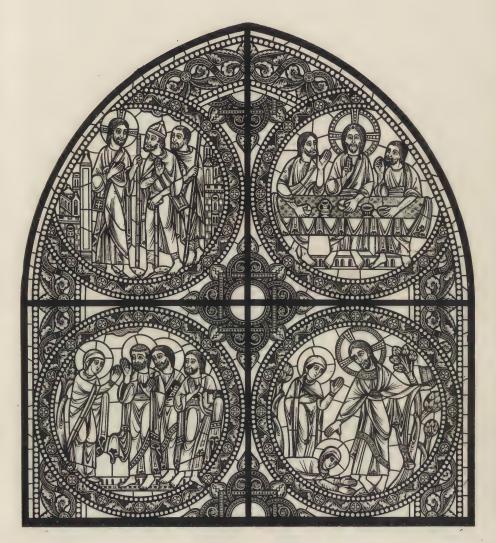
wall space to decorate in color, so the decorator was compelled to turn to the windows as a field in which to display Church under forms of beauty, for these picture windows were looked upon as the Bible of the poor and the uninlast the church windows blazed

"With forms of saints and holy men who died, Here martyred and hereafter glorified; And the great Rose upon its leaves displayed Christ's triumph, and the angelic roundelays. With splendor upon splendor multiplied.

In many cases the entire Bible history of man from Adam down to the Apostles was portrayed, if not as fully, as on Bible, from Genesis to Revelation, was and that hath skill in carving," so that

and twenty in breadth, left very little engraved, the letters increasing in proportion to their height from the ground, so that the whole could be easily read by the passing spectator; nevertheless, his art and express, as he was required in the windows were depicted all of the by the builders, the doctrines of the great events, which were made plain by these glass pictures to the meanest understanding. Even the ignorant could read the lessons they inculcated. structed. So successful was he that at But all this was brought about gradually, step by step; it was not until the building of S. Denis at Paris, by the Abbot Suger, in the middle of the twelfth century, that picture windows became an almost necessary constituent of every ecclesiastical edifice.

Suger, before building the abbey church of S. Denis, remembering the words of Solomon to Hiram: "Send me a skillful man that knoweth haw to the garden walls of the monastery of work in gold and silver, in brass and Koengsael in Bohemia, where the whole in iron, in purple, in scarlet and in blue,



IN CHARTRES CATHEDRAL.

The upper part of a medallion window.—XIIth century.

"I may build a house to the name of found its complete expression in the the Lord my God-for the continual whole. setting forth of bread and for the holocausts," made inquiries in every country, adapted to a single light, continued and gathered together the best artists to be employed from the middle of the of Europe out of every nation to assist him in the building and decoration of the church, the most stately edifice of long after the single lancet had given the age; the germ from whence sprung much of the best ecclesiastical art of

the next century.

Among the artists he called to his aid were those skilled in the art of making colored glass windows, more named there was a representation of one the new art of painting on glass with fusible metallic colors, an art discovered shortly before at Limoges. The painted windows in use before this disemployed ordinary transparent piginsured preservation for a time.

Suger saw the value of the new method of incorporating with or attaching metallic colors to the glass itself, and caused the windows for his church to be made in this way. I do not mean to say he was the first to use the new invention, as a few years before he commenced to build, the church of S. Maurice at Angers had been glazed with vitrified painted windows, but he was one of the first to promote

its use.

The windows of S. Denis are said to have been far superior to those of S. Maurice in execution, harmony, good taste, general arrangement, design and color treatment; the figure subjects were painted upon small pieces of glass, imbedded in a very wide ornamental border, a large number of these medallions entering into the composition of a single window. They were all related to one another through their color key, through their depicting various incidents in the same history, or some one point in a theological proposition which

This form of window, peculiarly twelfth century until the introduction of tracery, and in some parts of France

way to the mullioned window.

Contemporaneous with, and following the introduction of, medallion windows there were two other kinds: the canopy and the Jesse windows. In the first particularly those who were adepts in or two figures, executed in rich colors on a colored or white ground, occupying the whole window, within borders and under a low crowned, rude and simple canopy, out of proportion to the covery were not durable. The artists figure or figures it covered; the second variety carried a picture of the Tree of ments, painted upon clear glass and Jesse, a pictorial genealogy of the Reprotected the same by placing over it deemer, consisting of a tree or vine another piece of glass which was held springing from the recumbent form of in place by the means of leads. This Jesse, lying asleep at the foot of the window, the branches forming a series



An example of flesh painting where glass of various tones was used for the groundwork. XIIth century.



A JESSE WINDOW.—EARLY XHITH CENTURY.—FRENCH. In Chartres Cathedral. (Upper part.)



A JESSE WINDOW.—EARLY XIIITH CENTURY.—FRENCH.
In Chartres Cathedral. (Middle part.)



A JESSE WINDOW.—EARLY XIIITH CENTURY.—FRENCH.
In Chartres Cathedral. (Lower part.)

of panels or medallions, one above the other, in which were represented the king and patriarchs of the royal house of the Lion of the

Tribe of Juda.

The artists employed in making the windows for the Abbot Suger used very little paint, but followed a mosaic motif as far as they could, the glass of the time materially helping them to that end, as it was unequal in color and transparency, irregular in surface and texture, which made it more adaptable to mosaic effects than the more perfectlymade glass of a later date. At the same time these socalled "defects" increased the richness and gave a gemlike color to the glass. They used paint only in the flesh in outlining the figures



An example of washed shading.—English. Early XIVth century.



An example of outlining flesh painting.—Early XIIIth century.—French.

ornaments, and where they needed a line it was made of strong brown and the shading was done by crosshatching or by a thin wash of brown. When they wished to deepen the shadow they did not paint over the first application, but on the opposite side of the glass. They made their diaper patterns by smearing the surface of the glass with color and scraping the design through the paint to the glass. The faces, hands and naked parts of the figures were made with flesh-colored glass, excepting the eyes, which were often painted on white and leaded into the face; the beard and hair were made of small pieces of colored glass; the figures of windows containing glass made durwere badly proportioned; the draperies ing these two centuries. were worked into small folds, stiff and perceptible.

down folds. It was reserved for the colored glass. thirteenth and fourteenth centuries to of kings and nobles.

tecture until the walls of the church their folds; the compositions almost disappeared, the buttress alone simple and not overcrowded; holding up the groined roof."

Among the most beautiful ones are scanty; the backgrounds were either the exquisite jewel-like windows of the deep blue or red, occasionally diapered. cathedral of Chartres, a hundred and Each individual color in these windows forty-three in number, and containing was made with a separate piece of no less than one thousand three hunglass, and as the pieces were very dred and fifty subjects, with over three small there was consequently a large thousand figures; there are also some amount of lead work, but as the glazier magnificent windows at Rheims, Bourworked the leads into the outlines of ges, Tours, Poitiers and Angers; but the design their presence was scarcely taking these altogether they form only a small proportion of the incredible In studying the painted windows of number that once existed, for it is said, the twelfth century the student is forced on good authority, that in the sixteenth to admire the ingenious combination of century there were thirty thousand color, the rich rug-like effects and brill- churches, fifteen hundred abbeys, eighiancy of the glass, although much of teen thousand five hundred chapels the beauty is marred by the grotesque, and two thousand eight hundred priorstiffly-drawn figures inclosed in long, ies in France, and that every one of sheath-like vestments of many up and these was adorned with windows of

The first thing the student remarks see the full unfolding of the possibili- in studying the windows of the thirties and beauties of color glass; this teenth century is that the colors are was the period when the face of Europe more brilliant, more artistically comwas covered with buildings of great bined and skillfully blended than in magnitude and magnificence, the mon- those of the preceding century; and umental expressions of the faith, the that the artist, the master glazier, never devotion of the people, the munificence lost sight of the two fundamental principles that should always govern the In the almost countless cathedrals, use of colored glass in windows: churches, abbeys, chapels, colleges, 1st, that it should transmit light; 2d, hospitals and monasteries that were that it is only an auxiliary of archibuilt during these two centuries every tecture, a decorative adjunct. The form of art found an almost boundless figures, although generally lacking in field in which to display its particular expression, are better in drawing than form of beauty; the architects, the those of the preceding century, than sculptors, the metal workers, the paint-those in the Abby of S. Denis; the faces ers, the glaziers of these buildings oval in form are more delicately worked in unison to a common end, treated, often refined and vigorous, the one art helping another. For example, eyes having a somewhat natural exas the art of making picture windows pression, the hair and beard produced in colored glass attained perfection by varying the thickness of the lines; "the windows gradually expanded to while the draperies are broader in receive it in the contemporary archi- treatment, lighter and more natural in animals, trees and architectural de-What were these windows of the tails are still conventional, aithough thirteenth and fourteenth centuries the ornaments, taking their motives like? Luckily for the history of art, from the maple, oak, ivy and other in spite of the ravages of time, the leaves, are more natural and show fanatical devastations of the sixteenth greater precision in the drawing. The century and the destruction wrought windows as a whole exhibit in every by the revolutionists of the last, there detail great advance in the art of repare still remaining in France a number resenting natural objects, a more exact



EZEKIEL CARRYING ST. JOHN (UPPER HALF).—CHARTRES CATHEDRAL.
Allegorical window.—Late XIIth century.

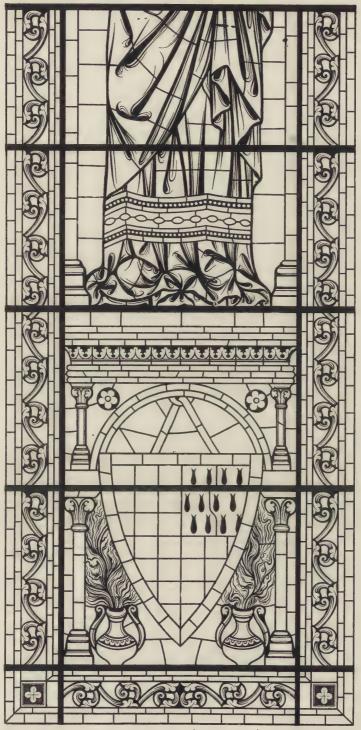


EZEKIEL CARRYING ST. JOHN (LOWER HALF).—CHARTRES CATHEDRAL, Allegorical window.—Late XIIth century.



THE BLESSED VIRGIN AND THE CHILD JESUS (UPPER HALF).—CHARTRES CATHEDRAL.

Late XIIth century.



the blessed virgin and the child jesus (lower half).—chartres cathedral. Late XIIth century.

ciation of the harmony of color.

guided, or more truly limited, by the



An example of English flesh painting of the XIVth century.

paramount object of all ecclesiastical

imitation of nature, and a great appre- bolic portrayals of the dogmas of the Church—" pictures where science on one In the choice of subjects the glass hand and doctrine on the other were painter of the thirteenth century was personified." They were in fact sermons "which reached the heart through the

eves instead of entering at the ears." But this choice of subjects was not made at random, it fell under the same rule that guided the encyclopædias of the time in their unparalleled classification of the universe: commencing with God, the creation of angelic beings, nature, science, ethics, and history. The windows were a poem in glass, "the first canto, reflecting the image of God, as the Creator, the father, and the giver of all good gifts; the second, nature, organic and inorganic; the third, science; the fourth, the moral sense; the fifth, the history of man; and lastly, the entire world." Where there were not enough windows in a church to carry out the complete scheme, some one portion was selected. Running through all the picture windows of the Ages of Faith there was a symbolism of great beauty, unsurpassed in its subtle and lucid exposition of truth by any other system ever devised by the genius of man.

Before passing to the history of the glass of the following centuries it would be well to examine into the way the windows, now under consideration, were made. Happily we have an authority: Theophilus, the monk, most trustworthy in every respect, as he was a contemporary, and has fully described the process in Diversarum Artium Schedula, which may be epitomized as follows:

"When you desire to construct a glass decoration of the Middle Ages, viz.: window, first make a smooth wooden the instruction of the illiterate and the board twice the size of the design, promotion of piety among the people, cover the same with a coating of white therefore the windows were filled with chalk, and draw thereon with lead or representations of scenes from Biblical tin, using a rule and compass, a full history, the lives of the saints and sym- outline. This done, draw within the

outline such figures and ornaments as and the first shadows firm strokes of shall have painted the glass to join various draperies and mark down the colors of each in its place, and whatyourself some hair pencils, viz., of the tail of a matin, or ermine, or squirrel, or cat, or of an ass's mane. Take a is to occupy and lay it flat on the plan, outer strokes only of the pattern on the board seen through the glass. If the piece of glass should be so dense that you cannot see the design on the board take a piece of white or clear glass and draw on that; when it is dry, lay the you see through it. In the same manused in the window. The glass is then cut to the forms shown by the chalk line by the means of a diving-iron, the iron is made red hot and applied to the glass; as soon as a crack appears the iron is drawn in the direction in which you wish to divide the glass, along the chalk lines, and the crack will follow the iron. Smooth the edges of the glass with a grossing-iron (grosarium ferreum) and fit the pieces together upon the board. Take the color which you are to use and paint the glass with the utmost care, following the drawing upon the board, putting the color on very thin where the lights are to be, and let the stroke be dark where the shades are to be, varying the stroke for different degrees of darkness. When you have made the first shadows in the draperies, etc., and they are dry, cover the rest of the glass with a light color, which should not be so deep as the middle tint in the shadows, nor so light as the lightest, but between the two. This so as to leave between those strokes hands not only various shades of yel-

you like, first with lead or tin, then in that light color. Figures on a white the same manner with red, or black pig-ground clothe with sapphire green, ments, making all the strokes carefully, purple and red, while those on the red because it will be necessary when you ground not painted make the draperies white. Paint the borders, leaves, shadows and lights according to the flowers, faces, hands and feet in the plan on the board. Then arrange the same way as the drapery. When the glass is painted, fix the colors by heat in a furnace. And when this has been ever else you wish to paint; mark the done place the pieces of glass once color by a letter. After this, make more upon the board in their places. After this take a head and surround it with lead grooved on either side, fitting the edge of glass into groove, then put piece of glass larger than the place it it back in its place, holding it there with three nails, which should be one tracing with chalk ground in water the finger long, slender and round at one end and square at the other. Join to this the breast, arms, drapery, etc., fixing them in place with nails on the outside. With a long and thin solderingiron made hot apply pewter to it wherever two pieces of lead come together, opaque upon the clear glass, raise it first taking care to scrape the surface against the light and draw on it what of lead and rub with the iron until they adhere to each other. The window ner you will mark all the glass to be having been completed and soldered in one side, turn it over on the other and treat in the same manner. The design may then be washed off the table or board to make it ready for a new one."

The method of making a window, as described by our monk, was the one employed by glaziers all through the Middle Ages, there was very little change, but toward the end of the thirteenth century there was a marked improvement in the leading; the vertical lines were formed to follow the outlines, as far as it was possible, of the figures and ornaments, the horizontal ones were hidden behind the stay-

The windows of the fourteenth century show a steady increase in knowledge on the part of the artists, more particularly in the matter of drawing and the harmonious use of color, the composition remaining about the same as that of the preceding century.

The advance in color treatment was being dry, make, with the handle of partially brought about by the introthe brush, near the shadows which you duction of a yellow stain made from first made, firm strokes in every part, silver, which placed in the artists'

warm their white glass and impart to honor independent of the architectural dows lost in depth and richness of color. doning the traditions of the great school Moreover as this stain was so easy of of the thirteenth century, they forgot application and ready in yielding tones the rule "that all ornament should conof lemon, yellow, gold, orange and red- sist of enrichment of the essential contempted to introduce it in excess.

vellow stain, there was another mode of that the glazier cannot be successful ing Clunisian monks.

found very useful, and as long as they were used in moderation the brilliancy lifeless and almost opaque; moreover, the end of good glass work, the deteri-

of the figures.

This stippling was produced by covering the glass, where a shadow was ligious thought, which would carry enamel, the color was then struck with siastical art in Northern Europe. a brush, only the ends of the hairs touching the pigment, in that way pick- of the fifteenth century at first was rich ing out the light. shadows, where great depth was sought, ing upon its irregularity in thickness

the tutelage of the architect. They uniform in texture, as the artists found

low, but a color with which they could claimed for their inspirations a place of the blue a greenish tone. Its use, how-design, and ignoring the idea that picever, was very much abused, as it was ture windows were but accessory to the used as a substitute for pot metal-a architecture of the building in which glass with the color throughout its en- they were to be placed, ultimately tire substance—consequently the win- aimed alone at pictorial effects. Abandish orange the artists were always struction of the building," that all parts should be in harmony with the whole In addition to the excessive use of in order to produce an artistic ensemble, work which was carried too far and where he acts independently of the employed too often in the fourteenth architect, as his windows, as well as all century, that known as grisaille, white other decorations, should form an inand black, or gray and gray; a style tegral part of the architect's design. that first made its appearance in the The sins of the glass painters of the thirteenth century and was largely used fifteenth century were still greater, for by the Cistercians, who, under the rule it mattered little to them if their of S. Bernard, were prohibited the use windows were out of key with the genof color decorations in their churches eral design, or if they admitted too and were content to have everything much or too little light. Their sole wish painfully plain, as a protest against was to make their work do them honor, the luxury, the pomp of color, orna- to manifest to the world what they mentation and ritual of their rivals in could do, instead of carrying out what monastic life; the learned, the art-lov- was required by the architecture. Alas! it is to be feared they have too many Grisaille and stipple shading were imitators in this our age of artistic enlightenment.

The abandonment of the fixed canons of the glass did not suffer, but as time of the art, the abuse of materials, and went on this shading was made deeper the exaggeration of individualism were and deeper until the glass became dull, suicidal steps, marking the beginning of as stippling readily lent itself to stencil oration becoming complete just as the work, the windows were overloaded glass painter in his pride had exalted with diaper patterns both upon the himself above his art. But his reign was backgrounds and upon the draperies short, the days of picture windows of color glass were numbered, the world was about to see a revolution in renecessary, with a uniform coat of color, before its destructive march the larger at first a light cool purple was used, at part of the art treasures of mediæval the end of the century a dark brown culture, and for years paralyze eccle-

To return to our subject: the glass These stipple and deep in color, its brilliancy dependwere applied to both sides of the glass. and the presence of air bubbles; but as Toward the end of the fourteenth the practice of stippling the surface century the painters on glass began to increased, the glass lost its richness, assert themselves, breaking away from and at the same time became more

they could work their enamels, stains, wholly divorced from their architectetc., much easier on glass that was ural surroundings. At the end of the mechanically perfect. The ruby glass century, and all through the next, the became light in tone and thin in apglass rapidly degenerated, the art pearance; the blue, cold and purplish; finally passing from the hands of artists the yellow, pink and green, stronger into the greedy grasp of the tradesmen and cruder. The best purple was made to find its death in the eighteenth cenby placing a sheet of light red glass tury. between two sheets of blue glass; and toward the end of the century white there was still some artistic merit, are glass was coated on one side with a those in the church of S. John at very thin layer of red, blue or yellow, Gouda, painted by Clox, Crabettis, which was used with good results by Dirk, Wonter, De Vrye and Daniel, all cutting a design through the flash of Netherlandish artists. In these wincolor down to the white glass. Bull's- dows the painters introduced stronglyeyes of four and six inches in diameter painted landscapes, Renaissance arwere largely used in domestic work.

ders; the foliage was irregular, flat of lasting and artistic value. and conventional. The best examples In the seventeenth and Barbe; in the Cathedral of Rouen, by Robin Demaique and Guillaume de Dominic. great Albert Durer drew designs which the world. were transferred to glass by copyists, a fatal practice, in which the touch and England and wherever Protestantism originality in handling are lost. The became paramount, was complete from sixteenth and seventeenth centuries the first appearance of the new faith. fair, and most of it bad.

drawing, handling their colors well, and in the chaos of the French Revolution,

The last windows made, in which cades and corridors, although the The picture windows were simple in church is Gothic—a fact that was of no composition, varied in color, often moment to them. Their sole aim was harmonious and generally pleasing; absolute realism, startling prospectives the figures were highly finished, refined and elaborations; they looked upon the and reposeful; the features were care- glass as if it were canvas, and the result fully drawn; the draperies were heavy, was what might have been expected but ample, well disposed in broad folds from a wrong use and abuse of a maand ornamented with embroidered bor- terial: they failed to obtain anything

In the seventeenth and eighteenth of the glass of this period, now in ex- centuries the use of enamels became so istence, are to be seen in the Cathedral excessive as to almost do away with of Beauvais, executed by Guillaume pot-metal; many windows were made wholly by painting and staining white glass. The art was now solely in the Gradville; in York Minster, by John hands of manufacturers and the windows Thornton, of Coventry, who was three became purely articles of trade, with a years making the window, which still very poor market which became smaller remains uninjured and is singularly and smaller from year to year until all rich in design. In addition, there are a demand ceased. Thus at the end of number of examples in Germany by the eighteenth century the noble art Jacques L'Allemand; in Italy, by Bar- of placing images of beauty between tolommeo di Pietry and Guglielmo di earth and heaven for the edification of Marcillat, the three last-named paint- the people, for glory of art, the love of ers were members of the Order of S. beautiful and the honor of God, disap-Late in the century the peared for a time from off the face of

The demise of the glazier's art in were rich in painted glass, some of Its death among the Catholic nawhich was artistically good, more of it tions was slow and lingering, passing through many stages of deterioration At the beginning of the sixteenth until it sank, together with all other century the artists were very skillful in forms of ecclesiastical art, out of sight managed their shadows with great never to live again until the revival of knowledge, but their windows were the principles that first gave it being or more pictorial than decorative and at least called forth its greatest work,

man to use temporal beauty not alone of their vestments, the pictures that for his own pleasure, but for the honor adorned the church were either purof his Creator, for the manifesting of loined or defaced, the windows sold his love for God by constructing mate- for their glass, or left to decay, or willrial and perishable substances into fully broken, and there is no doubt eternal tabernacles of praise, to be they would have been all removed houses of consolation, and the mirrors from the 10,000 churches that were left

of eternal truths.

in England of which we have a record, not have exposed the congregation to is one representing the crucifixion now the inclemency of the weather. Harriin S. Margaret's church, Westminster. son, an Elizabethan writer, in his detrates of Dort, who intended to present tured windows were not taken down it to King Henry VII., but, he dying because it would have cost too much tion; and at last it was bought for S. Margaret's Church.

To all lovers of art it must be a conwhich once glazed the 45,000 churches ceeded forthwith to overthrow and 55,000 chapels that existed in England prior to the change in religion did not meet with the same happy fate as that of the Crucifixion of S. Mar-

garet's.

The extent of the spoliation and destruction of works of art under Henry VIII., Edward VI. and Elizabeth is almost beyond belief, if we had not the reports of the Commissioner of the Crown to prove the fact. Everything that could be turned into money was taken: the gold and silver vessels, the fabrics themselves were pulled down for materials with which to build the mansions of the courtly founders of the "new learning. Even the tombs and

viz.: That it was a part of the duty of their leaden coffins," the vestries rifled eternal truths.

The last "pre-Reformation" window spent its force, if the removal would It was originally made for the magis- scription of England, says the picbefore it was completed, it fell into to replace them with clear glass. the hands of the Abbey of Waltham. These are his words: "Monuments At the dissolution of that house by of idolatry are removed, taken down Henry VIII. the window was removed and defaced, only the stories in to New Hall in Wiltshire; it subse- glass windows excepted, which, for quently, in turn, became the property want of sufficient store of new stuff, of the Earl of Ormond; Thomas Bul- and by reason of extreme charge that len, the father of Queen Ann Bullen; should grow by the alteration of the the Earl of Sussex; George Villiers, same into white panes, throughout the Duke of Buckingham; it then passed realm, are not altogether abolished in into the possession of Gen. Monk, who, most places at once, but by little and to preserve it from the "image-break- little suffered to decay, that white glass ers" of his time, buried it in the ground, may be provided and set up in their where it remained until the Restora- room." The windows that escaped the general ruin were to find their destroy-£,400, almost three hundred years after ers in the Puritans, who, becoming imt was painted, from a Mr. Conyers, by patient of this waiting for the hand of time to destroy the remains of Catholic art, visited church after church, under stant regret that the picture-windows the authority of Parliament, and prosmash into bits almost all the picture windows that were left, for they had no love of God's light that passed—

> "Through the dim Gothic glass of pictured Saints

> Casements, through which the sunset streams like sunrise,

> On long, pearl-colored beards, and crimson crosses,

> And gilded croziers, and crossed arms and cowls, And helms and twisted armor, and long swords; All the fantastical furniture of windows. Dim with brave knights and holy hermits."

In Exeter Cathedral they demolished all the windows; at Winchester they fired bullets through those which were above their heads, having first broken funeral monuments were violated "for into atoms all within their reach with the greediness of the brass, the dead their pikes and the butts of their guns; cast out of their graves for the price of at Canterbury one of their number

ascended a ladder of sixty steps to rattle "down proud Becket's glassy bones," and one band under the command of Sir Edmund Walter in the short space of three months destroyed no less than 701 pictures, 32 statutes, numbers of crosses, crucifixes, roods, and numberglass windows. In Catholic countries the art disappeared through a revival of pagan realism, of pagan architecture and pagan decoration. There was little place for colored windows in the churches engendered by the Renaissance and its meaningless child, the Rococo, the antithesis of mediæval art. Palladio and his followers of every nation kept the windows of their buildings in clear glass, looking to Grecian and Roman art for their criterion, and, as this spirit of paganism spread, the faith of the people was weakened, selfishness increased, the cycle of human existence was gradually bound within a circle of materialism that left no reasonable motive for action beyond eating and drinking, the avoidance of pain and the enjoyment of the moment. Therefore they ceased to build churches, and those that existed were allowed to fall into a ruinous state. There was no room for art of any kind, except as a factor in giving sensual pleasure to the "best man," and even this ended in France amid the atheistic orgies of 1798. From this rapid survey of the history of colored glass windows the following canons may justly be drawn, and it is my belief they should largely guide the artist of to-day:

I.

The color value of glass, its principal excellence, depends for its brilliancy upon the pureness of the color and its unequal distribution, together with an unevenness of texture in the glass.

II.

Next to color, the chief excellence of glass, for decorative window work,

is its translucency, and in order to render available this quality, to the utmost extent under every conjuncture, paint and enamels should be avoided as far as possible, as they lessen the translucency, augment the opacity and make the glass lifeless, hence the mosaic system of work should be followed.

III.

As leads are necessary in the construction of a color-glass-window, and as their office is primarily mechanical, they should, therefore, be made an integral part of the design in order to overcome their purely constructive appearance; moreover the lead lines should be softened, where it can be done without interfering with the general effect, by plating them with glass.

1V.

The worker in glass should never seek for an effect which is incompatible with the material.

V.

It is to be remembered that the glazier's art is but a handmaiden to architecture, therefore colored glass-windows should be in harmony with their architectural surroundings, not only in color but also in form.

VI.

Glass work has its own proper field, and the moment it leaves that field it deteriorates.

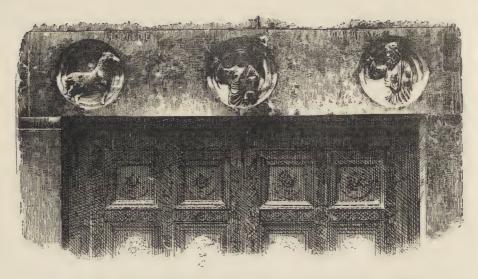
VII.

Truthfulness in the glazier's art, as in all arts, is essential to its lasting success.

VIII.

As the commercial spirit kills all true art it is to be avoided by the artist in glass, if he hopes to attain the best results, and be remembered by posterity.

Caryl Coleman.



A HINT FOR PREPARING FOR A COUNTRY HOME.



of country life, its recreations and ac- mind. tivities. It has often been observed the like.

fessional men have sparse time to de- heeding: Beware of buying a place on

LONGING for a coun- vote to sports. In getting on in the try home develops it- world their time is fully occupied, but self early in the career as a man's family grows up around of very many city- him the question as to where to house born men and grows them under the most favorable condiwith advancing years. tions becomes a serious one. Not in-A country boy who frequently he concludes to buy a coungoes to a city to strive try place, and he mentally determines for a name or fortune is so captivated on the kind of place that he wants. It with the novelty, the excitements and must not be too far away from his the allurements of town life, that many office, and it must be obtainable at a years pass by before he becomes surmoderate price. He sets about making feited and turns, as almost invariably he inquiries among real estate agents, finally does, with tired heart for the and finds that there are any number peace of his early surroundings. Women, of places and at prices that are within as a rule, care less for the country than his set limits, and in any direction that men; they prefer the conveniences, the he wishes to go. He visits several, ease, the social advantages of the city; but one by one in turn they prove disand for a summer vacation choose a appointing for one reason or another, sojourn at a watering-place hotel and he ends by buying none, or perhaps rather than at a farm-house. There he buys a more expensive place than are exceptions, of course, to this rule, he at first intended, and yet one that is many women being passionately fond not what he had pictured in his own

An old place is usually a good thing that city men and women enjoy out- to leave alone. Too frequently the door sports to a far greater degree house is inconvenient, the rooms stuffy, than do people born and brought up in the cellar damp, the drinking water imthe country. They frequently astonish pure, the grounds laid out without the latter, with their zest for hunting, taste or skill, the shade trees in the fishing, boating, riding, driving, and wrong places, and the orchard in its dotage. The surroundings are rarely The great bulk of business and pro- good, and the following advice is worth

the strength of a photographic view self-respecting but respected by his looking toward the front of the house. friends and neighbors. The investment After a purchase is made, alterations to of a couple of hundred dollars in a few the house are in order, and in a surpris- acres of land; the preparation of the ingly short time it will be found that ground, the planting of trees, the makabout as much money has been ex- ing of roads, the building of a house pended for changes and improvements and barn; these are the work of years as was paid for the house itself, and perhaps, but they beget thrift and possibly without increasing its value in economy and purpose. And when the the eyes of the next purchaser.

monly looked for accessories of a coun- any, as to well repay him. try place for many years. An invest- There are a great number of city ment in a few lots of ground and a new men whose vocations enable them, house is one of the many schemes of during the summer months at least, to suburban land speculation which does leave their offices and places of businot meet the needs of a city man for a ness at comparatively early hours in real country place, however much such the afternoon, say four or five o'clock, suburban homes are exactly what is and to arrive at comparatively late wanted by a class of persons who desire hours in the mornings, say nine or ten to live with more comfort than their o'clock. Within forty to sixty minutes' limited incomes enable them to do in ride by railroad, within a distance of the city.

expensive country places, with the —in almost every direction, is plenty grounds laid out in a sensible manner of land used only for farming purposes or as the occupant wishes, and the and valued only for such use; or wild house modern and exactly what the land really not used for any purpose, occupant likes, in what way are such although beautifully situated. places to be obtained? The brief and starting out to purchase, keep on the direct answer is that each man must main line of a railroad rather than on a prepare his own country place. This branch road. Take a way-train and is not a difficult thing to do, there is get off at some small station, which much pleasure and healthful recrea- according to the time table gets scant tion in the doing of it, and but a mod- accommodation. erate amount of money is required.

to make for himself a home in the coun- Within a mile from that station a strip try the better, nor need he be married, of high land of almost any of the Bachelors become benedicts, and if a farms can be purchased, and one hun-few remain single they, too, require dred dollars an acre would be a libhomes quite as much as their married eral price for it. brethren. Neither is a goodly income are sufficient for our necessary, for a very moderate sum of There are 43,560 square money is sufficient for the start, and as an acre. money is sufficient for the start, and as an acre. A strip, fronting 200 the huge oak grows from the small feet on the road, by a depth of about acorn so will the homestead surely and 650 feet, will contain, say, three acres. almost imperceptibly develop from a If a purchaser does not care to trust his very small beginning. The ownership own judgment in selecting a site, it is of land brings out qualities in a man's easy to secure the services of some nature that otherwise remain dormant, experienced person to act as advisor, such as pride of position, which will A wise man anticipates his wants, and keep him respectable; the love of the purchase of land should not be decountry is a very healthy love, and layed because it does not happen to be contributes to make him not only actual summer time. The fall or early

work is complete, however slow it may A brand-new place frequently means have been of accomplishment, the to live in a chaotic state, no shade homestead will give such comfort to trees, no fruit trees, none of the com- the owner and his family, if he have

twenty-five or thirty miles from New Now, recognizing the want for in- York-to name one city as an example Small settlements grow, oft-times rapidly, and with their The younger the man is who starts growth get much better train facilities. Three acres purposes. feet in

a selection than when the full foliage of vening, in three rows of three trees each, location for a dwelling, and the most shown in the illustration, have been acdesirable building site may be on that counted for. least. Usually land near a line of rail- rear lot to any desired number. road can be bought cheaper than land trees should be planted with as little further away, as farmers are afraid of delay as possible, so as to start them hilly locations most affected of late quired at reasonable rates. years by city people for villa residences. In driving daily to and from the rail- illustration is only a suggestion. In

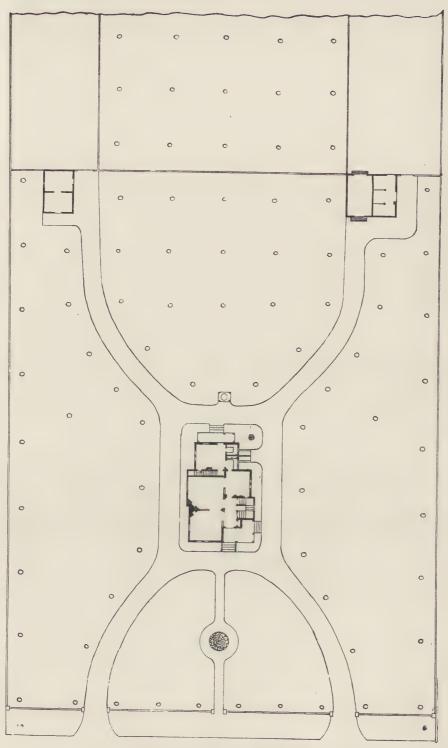
over than a hilly one.

this article is given as a hint for the upon. It is not a bad plan to build the arrangement of a country place. Little kind of a house that may be regularly explanation is needed. It shows a added to and increased in size when plot of ground 200 feet in width by 250 additional room is required. An alterfeet in depth, containing a little more native is to build a small, cheap cotthan an acre within the line of fence. tage for temporary use and, if future rear. Assuming that such a strip of land the house in due time with a larger and has been purchased, the first thing to more costly one. do with it is to remove every tree on the front lot and have their stumps ex- fashioned, but convenient treatment tracted. ploughed, graded and rolled and riage road in front, and a straight foot-

winter months is a better time to make pear trees, eighteen in all, and intertrees and bushes obstruct the view. A are nine apple trees. Thus, within the farmer gives little thought to the proper inclosure, the sixty-five trees located, Additional apple and portion of his farm which he values the other fruit trees may be placed in the locomotive sparks setting fire to ripen- growing. Trees are cheap, of great ing crops, such as rye, wheat and oats. variety, and readily obtained from If possible select a strip of land having numerous nurseries. The roads should a durable brook running the whole be staked out and gradually made length of it or across it. A valley using all the old stone on the place for where the land for the most part is the bottoms. The farmers in the neighlevel, with hills rising in the distance, borhood, at odd times, with their teams, is preferable in many respects to the will do almost any kind of work re-

The plan of the house given in the road station a level road is much more laying out the grounds there is required agreeable and expeditious to travel merely a liberal space allotted for the house, and then the dwelling may be The illustration which accompanies large or small, as ultimately decided One or more additional lots fill out the prosperity comes to the owner, replace

The illustration shows rather an old-Then the lot should be for the roads; an elliptical-shaped carseeded. In the Fall or Spring the trees path-many will prefer to omit the latare to be planted. A picket fence, ter, leaving the space entirely in lawn using white oak or chesnut posts and -and a road to the stable and padhemlock picket, should inclose the whole dock, and one to the chicken house lot, and the front line of the fence should and kitchen garden. It is a simple be set back, say, six feet from the line treatment for an inside lot. Circumwhere the ordinary farm fence is found. stances alter cases, and the lay of the The line for the front of the house should ground would have much to do with be placed back from the new front fence determining just how the roads should line, say, seventy-five feet. Referring run. A corner plot of ground would to the illustration, it will be seen that require a different treatment, and if along the front ten shade trees have there be a stream of water or some been located. Down each side fence other special feature on the place the are eight cherry trees, these combining plan needs to be made to conform fruit and shade. Surrounding the loca- thereto. Before proceeding with the imtion for the house are eight maple provements the plot should be mapped, trees, and on one side of each of the and every proposed thing marked two front carriage roads are two shade thereon to a scale-roads, trees, etc. trees. Along the back roads are placed The work is interesting at the start,



A SUGGESTION FOR PLAN OF GROUNDS.

turn back.

Much land only brings much vexation. To live in the country without a horse and cow is to deprive one's self of the ordinary comforts of country will be wise to do no farming of any kind, and to resist the temptation to buy more and more land.

and becomes more so with every step not more distant now in point of time taken. He who fairly starts in will not than was Harlem from the City Hall ten years ago, nor has the longer distance a tithe of the discomforts that have to be endured in going a comparatively short distance within the present city limits to-day. Outlying life; but it is cheaper to hire pasture farm lands will gradually increase in than to own land, cheaper to buy hay value and come into greater demand for than to raise it. Indeed, the city man residence purposes. A safe and profitable venture would be to take a favorably situated farm, divide it up into two or three acre plots, plant trees and other-The growth of population in New wise prepare each plot for future build-York, as in other large cities, is crowd- ing sites, and then calmly wait a few ing people out farther and farther into years before offering the plots for sale, the suburbs every year. By the many when purchasers in plenty will be found railroads, twenty-five to thirty miles is at prices many times over the cost.

William J. Fryer, Jr.





DETAIL OF FRIEZE IN LATERAN MUSEUM.

MOSAIC AS AN INDEPENDENT ART.



ing; but an art in itself, eminently mixed. This combination, giving the and sculpturesque form the walls or pavements of palace or of church.

breaking up of some large uniform surface, as in pavements or great extent of wall; then where the artist required durability or special splendor and breadth of color, or harmony with architectural form, as in outside pictures, in domes, apses or cornices. We all re-Ahasuerus in the book of Esther, where,

vera pittura per l'eter- "ornamented with figures made of little nità è il mosaico," wrote stones of various colors," and Hiero, Domenico Ghirlandaio, Tyrant of Syracuse, had the whole of the famous Florentine the Iliad represented in mosaic on the painter, in the second deck of a galley. The two last seem to half of the fifteenth cen- have been mosaics in the true sense of tury. Mosaic, however, was to him not the word, formed, that is, not merely the servile handmaid of painting it be- of colored marbles (an arrangement came towards the end of the Renais- known to the Romans as lithostratum sance period, having the blind imitation or disposition of stones), but consisting of its mistress as chief scope of its be- of cubes of marble and enamel interfitted for clothing with breadth of color artist greater resource, enabled him to produce works of greater effect, to which the name mosaic (musivum) was From the most remote times have properly restricted. The two kinds of mosaics been used as means of decora- decoration are often confounded under tion. They were laid under requisition one name, though the one is evidently first where, painting being impossible vastly inferior to the other as regards or inconvenient, the eye yet craved the resource of development and the demands it makes on taste and technical

The Romans fell in love with mosaic as taught them by the conquered Greeks, adopting it for the pavements of their palaces and public buildings; Cæsar (at least so Suetonius assures us) member the description of the palace of even had the floor of his tent made of The pavements of their villas, amid hangings of fine white and blue cleared of rubbish in these later years, cloth, couches of gold and silver stood still shine in all their glory of coloring. on a pavement of porphyry and white and show sometimes conventional demarble and alabaster and stone of a blue signs of great beauty, sometimes scenes color. Ptolemy Philopatre is said to from Greek and Roman mythology, or have had a saloon in one of his ships episodes of the circus or the chase.

so frequently copied. "Sosus," says Persian army.



Pliny, "made at Bergamo, the Asarotos oikos (unswept house). It was so called because he had there represented, in little cubes of various colors, the remains of a banquet, which are generally swept away, and which seem to have been left there. There is a dove drinking, and the shadow thrown by his head on the water, while others plume themselves on the side of a bowl." Or, again, the artist obliged the owners of the villa to walk continually over a crowd of monsters, men, buildings, rivers, in which unity of design was lost in multiplicity of detail, or over fighting beasts or fighting men.

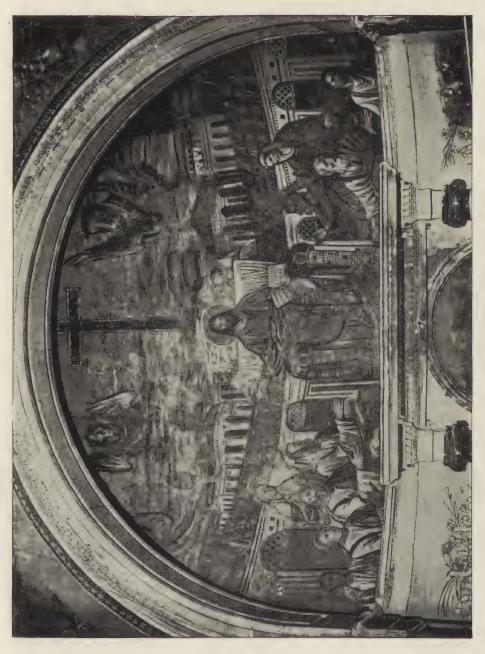


in the mosaic; but the movement of the Florence. M. Vitel, the famous French

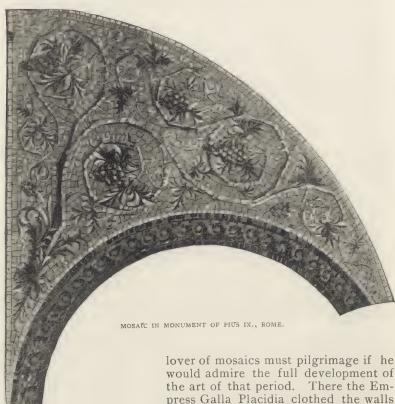
Sometimes, again, they were covered upper part of the body is full of vigor, with genre pictures, as in the mosaic as is also that of the Persian leader, and from which the "Doves of Pliny" are of the crowd of men and horses of the

Three hundred years after Christ, Christianity, become now, thanks to the Emperor Constantine, a recognized power in the state, pressed the art of mosaic into its service. natural, it first of all adapted pagan traditions to its own requirements, giving a symbolical meaning (as in the church of S. Constance at Rome, built by Constantine himself) to the various vintage scenes which had formerly honored Bacchus. But it soon struck out a way for itself, and by the end of the fourth century had already produced, in catacomb and church, representations of purely Christian scenes and personages. These scenes and personages are of course no longer to be found on the floors of palaces. They clothe the walls of churches. Mosaic has become, in fact, the vehicle of specially religious thought; and such it remains to the present day.

The best of these early Christian mosaics is that of Sta. Pudentiana at Rome. It dates from the fourth century, though it was evidently restored and added to later. The Christ, draped and throned, sits between two lines of adorers. Sta. Pudentiana on one side, and Sta. Prassidia on the other (the two sisters were martyred towards the middle of the second century), hold crowns over the heads of St. Peter and St. Paul. The semicircle of figures is framed behind by porticoes, above which are visible the buildings of a city on each side of a tall jeweled cross, rising from a barren hill. The upper part of the mosaic is occupied by lines of clouds, from which emerge the four mystic creatures—the lion, the bull, the eagle The author of this and the angel. mosaic was in advance of his contemporaries. His figures are grouped in perspective; the faces show variety of One really beautiful and spirited mo- expression and lineaments; the heads, saic, found at Pompeii, and now in the well-modeled, are of Roman type; the museum at Naples, represents the bat- draperies seem copied from the antique. tle of Arbela. Alexander, in the act of There is no trace of the angular ascetispearing a Persian leader, is unfortu- cism so conspicuous in the thirteenth nately deprived of his legs by a break century work of the Baptistery at



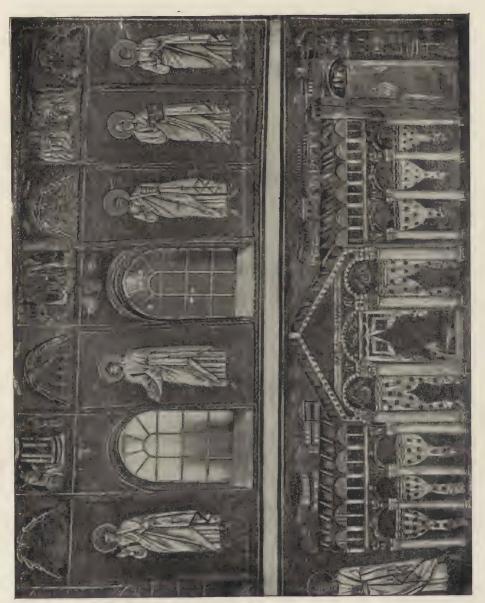
MOSAIC IN CHURCH OF STA. PRUDENTIA, ROME. - ANNO DOMINI 384-396.



critic, sees in its composition "quite new treasures, chaste expressions, a flower of virtue, a moral grandeur with which the most beautiful works of antiquity are but imperfectly imbued."

Having once adapted mosaic to its own use, Christianity carried the art with it into all parts of the world. By the end of the fifth century, the walls not only of the churches in the various parts of Italy, but of those in Constantinople, Thessalonica and France shone with gold and color. It was at this epoch (under Pope Hilary, 461 to 467), that the charming symbolical decorations in the Church of St. John the Evangelist, at Rome, were later. made. The council held at Constantishould be permitted for the allegory of symbols; and the artist was free to Lamb. But it is to Ravenna that the It is in fact one of the best representa-

would admire the full development of press Galla Placidia clothed the walls of her husband's mausoleum and of the baptistery with a bewitching harmony of figures and symbols. The use of the blue background (which Raphael also adapted, centuries later, in the only mosaic he designed), is at once restful and elegant; and it enables the artist to employ gold freely in the dresses of the figures. The example set by Galla Placidia became a tradition. Herulians, Ostrogoths, Greeks continued the work, and Ravenna, notwithstanding all the turmoil of war and continual change of government, became, during the fifth and sixth centuries, a veritable city of mosaics. Giotto made a pilgrimage thither, more than seven centuries It is even said that he found the type of his Judas in the thick-lipped nople in 692 had not yet decreed that figure which gives the traitor's kiss, in realistic scenes from the life of Christ one of the mosaics of S. Apollinare Nuovo, a church built and decorated by Theodoric the Great. Well known is cover the roof with flowers, fruits, and the Christ from the Church of S. Vitale, birds, around the central figure of the which was dedicated under Justinian.



MOSAIC IN THE CHURCH OF S. APOLLINARE NUOVO.



MOSAIC, THE BAPTISM OF ST. JOHN.—RAVENNA, IVTH CENTURY.



MOSAIC IN THE CHURCH OF S. VITALE, -VITH CENTURY.



MOSAIC IN THE BAPTISTERY, FLORENCE.—XIIITH CENTURY.

tions of the early idea of the Saviour, and figures him as a beardless youth, of much sweetness of expression, not as the bearded, hard-featured judge of the later Middle Ages. The difference ingly on comparing this Christ in S. Vitale with the Christ of the Last Judgment. The coloring is rich, but the undue crowding, nay heaping up of the figures, reveals an absolute want of any sense of architectural fitness. The figures are angular and monkish, the draperies stiff. It is a long step indeed, from the modeling of the figures in Sta. Puden-

Meanwhile the decadence was progressing rapidly at Rome. Perspective was going out of fashion. The childish habit began to prevail of making size and richness of dress proportional to moral grandeur. The sense of symmetry and harmony was lost. There remained but a semi-barbarous love of color. The inscriptions on the mosaics of the succeeding centuries vaunt the splendor of the "cut metals which produce a painting of gold; and the light of day seems to be caught confined there. The dawn, like liquid clouds, appears to warm and vivify the country."

For six dreary centuries did this artistic depression continue; until at last, under Pope Innocent II. (1130-1143), Rome roused herself from her lethargy and began to produce work of real mosaic art once more. Rome, Venice, Sicily, the Holy Land, France, produced in mosaic figures whose pose and action were already superior to those of the painters of the thirteenth century. Venice set seriously to work at the decoration of St. Mark, but the most amazing production of her territory at this time was the ornamentation of the cathedral on the little island of Torcello, now rarely visited; though the interest and good preservation of the mosaics will repay study.

Once begun, the work of revival grew apace. The thirteenth century shows us a crowd of mosaicists busy in all the chief towns of Italy. From Rome and Venice the fever spread to Florence, where it was resolved to undertake the decorations of the Baptistery. Andrea Tafi, intrusted by the Magnifici Signori with the work of the Cupola, went to Venice to study the art among the Greek mosaicists, then engaged on S. Mark's. He brought home with him a Greek named Apollonius, and the two, with Gaddo Gaddi,

tion of the Last Judgment. The coloring is rich, but the undue crowding, nay heaping up of the figures, reveals an absolute want of any sense of architectural fitness. The figures are angular and monkish, the draperies stiff. It is a long step indeed, from the modeling of the figures in Sta. Pudentiana to the treatment of those in the Florentine Baptistery. The first still show the influence of free Greek art: the second of Greek art enslaved through long years by the confining dogmas of the Church. Gaddo Gaddi perceived some of these faults, and. intrusted with the execution of the prophets under the windows of the Baptistery, tried "to unite the Greek manner with that of Cimabue." But his masterpiece in Florence is the Coronation of the Virgin over the great door of the Cathedral; a composition in which, though traces of the old style still remain in the overcrowded lower part, the process of emancipation is nevertheless clearly visible in the more natural movement of the principal figures, and greater delicacy and transparency of the coloring.

Gaddo Gaddi was afterwards called to Rome, where the Franciscan monk Jacobus Torriti, as he signs himself, had died at the end of the century, while executing his masterpieces in St. John Lateran, "omnium urbis et orbis ecclesiarum mater et caput." Specially worthy of note is the apse of the Church, dominated by the miraculous head of Christ which is said to have appeared to Constantine, and to have remained intact from that day to this, though subjected seven times to the flames and often removed from its original position. As at present existing it is certainly the work of Torriti, and is remarkable mainly for the expression, but also for the art with which, by a clever mingling of red, blue and white cubes, with the black, the graceful fluidity of the hair and beard has been attained.* Torriti may be con-

^{*}In the accompanying photograph the white lines represent lines of brown or blue cubes; some of them are not homogeneous, but composed of red and blue cubes. When looked at closely the colors are clear and distinct; from afar the mass is black and transparent.



THE CORONATION OF THE VIRGIN, IN THE CATHEDRAL, FLORENCE, BY GADDO GADDI.



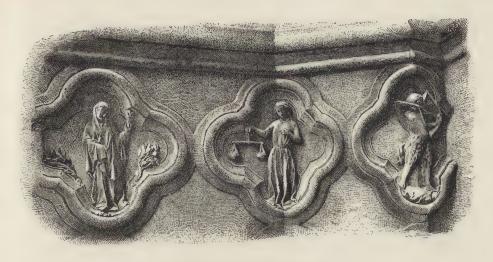
MOSAIC IN ST. JOHN LATERAN, ROME.

the whole atmosphere of the place. at Venice.

sidered the last of the mosaicists of the Those who worked after him—the Ruold school. To him mosaic was still suti, the Cosmati, Gaddo Gaddi—were an independent art, whose resources already on the downward road. They must, however, be kept in dependence began to multiply detail and to proon the architectural requirements of duce rather a series of pictures imitathe building to be decorated. His fig-tive of Giotto than a well-conceived ures are in perfect proportion with the decorative whole. The tendency was dimensions of the edifice and the height continued during the following cenat which they are placed. They are tury, when mosaic was eagerly folsculpturesque, yet never stiff; the dra- lowed by the painters of the earlier peries are supple, the coloring trans- Renaissance; but for the more imme-parent. The artist never loses himself diate and profound influence of paintin detail; the unity of his conception ing on mosaic we must turn, not to impresses the gazer with a sense of Rome nor to Florence, but to the grandeur eminently in harmony with Cathedral of the Lagoons, St. Mark's

Isabella Bebarbieri.





FRENCH CATHEDRALS.

PART II.

V.



in central Europe has been onward. Roman emperors, and their successors which witnessed one of the most remarkable outpourings of human genius.

doctrinal growth, in the settling of the of the humblest origin. Suger, the re-

HERE can be no greater Church's attitude, if the expression be mistake than to speak of allowed, towards God and man. It the eleventh, twelfth and was struggling to assume its natural thirteenth centuries as outward form, but it required a thou-"dark ages." From the sand years for the Pontiffs to become time when Charlemagne absolute in temporal affairs as they had proudly and laboriously long been in spiritual matters. The undertook to bring about a revival of tremendous difference between the art and learning, the trend of thought early bishops of Rome, martyred by Not always, perhaps, as we now in the Middle Ages, is well illustrated understand progressive movements; by the spectacle of Pope Gregory VII. the three centuries were unequal in keeping the emperor, the successor of civilization; men could not emerge at the once mighty Cæsars, barefooted in one bound from the darkness into the snow for three days before admitwhich the fall of the mighty Roman ting him to an audience (1077). Innoempire had plunged them. The age cent II called himself master of the culminated in the thirteenth century, imperial crown, to dispose of as he wished (1130).

History in this period was filled with Religion was the dominating influence the doings of popes and kings, of lords in the Middle Age, the source of its life, and bishops, of high-born men and the one thing around which its culture women. We hear little of the people centred. Preceding centuries had been or of the masses, save in struggles experimental stages of Christianity, in against the lords. Yet the way of adwhich the faith had been adjusting vancement was not closed to them. itself to the varied social and political Gregory VII., who subjected the most conditions with which it came in con- powerful sovereign in Europe to a They had been times rich in humiliation unparalleled in history, was

them.

knights, men, women and children, to ern Europe. leave their possessions and their homes, It would be a mistake to attribute all once so disastrous and so fortunate.

Holy Land, one in 1248 and one in 1270. mercial crusade to the Pope.

The Crusades in the East were the most famous; those in the West the finally dominated the religious, and

nowned abbot of S. Denis, the close the victory of Las Navas de Tolosa friend of two French monarchs, and (1212), which resulted in driving the sometime regent of the kingdom, was Moors back into the kingdom of Graof similar origin. Thomas à Becket, nada. In 1208 began the cruel crusade the most popular saint of the age, owed against the Albigenses in southern much of his popularity among the France, a crusade nominally directed common folk to having been one of solely against heretics, with the pious purpose of exterminating their irrelig-The papal supremacy was an indica- ion, but largely influenced by the possition of the mighty hold religion and bilities of plunder and the gaining of religious ideas had upon the people; no riches in despoiling the wealthy cities infidel or indifferent age could have and lands of the south. Ultimately, seen such an evolution of spiritual however, these wars brought about the power. The Crusades supply even more union of northern and southern France. telling evidence. It is impossible for In 1225 the Teutonic Order began the the modern mind to comprehend the conquest and conversion of the Prusenthusiasm which led kings, lords and sians, and founded a new state in north-

to travel through strange lands, and these movements entirely to religious seek battle with powerful foes of un-motives. Religion served as the preknown resources, all from a religious text at the beginning of these eximpulse. Without question, the first peditions, but not in the sequel. In crusades were the product of a spon- France, especially, the spirit of adventaneous religious enthusiasm; never ture had seized the people. Southern before nor since has religion so moved Italy and Sicily were conquered by the the souls of men, nor with results at Normans, 1053-1066, who also made their most famous and permanent con-The interest of the Crusades is not quest, that of England, in 1066. A confined to the light they throw on the French prince, Henry of Burgundy, religious feelings of the time. They great-grandson of the French king exercised an enormous influence on the Robert, founded the county of Portugal civilization of Europe, not, perhaps, so in 1095. In 1099 a French kingdom much by direct importation of Eastern was founded in Palestine. In 1204, by ideas into the West as by that broad- a most shameful perversion of the Cruening of view which inevitably results saders' motives, a French prince was from travel and contact with new and made emperor at Constantinople. strange things. So the architectural There was no limit to the ambition of activity of the Middle Ages in France the French people; their successes in began hard upon the culmination of the Europe spurred them to fresh conquests first crusade in the capture of Jerusa- in Asia. Each succeeding crusade in lem (1099). The twelfth century, which the East had less and less of the religsaw the beginnings of many of the great ious impulse of the first, though the French churches, saw four crusades, of piety and faith of S. Louis cannot be which the first, preached by S. Bernard questioned. But among the people (1146), was the most famous, and the and the nobility they came to be most disastrous of the entire series. In looked upon as sources of revenue, this century, two French kings, Louis as providing opportunities for gaining VII. in 1146, and Philip Augustus in wealth or of leading a life of adventure 1188, led two crusades in person, and and of irresponsible freedom. It was a in the following century S. Louis confitting climax that in the year 1327 the ducted two ill-fated expeditions to the Venetian Sanuto should propose a com-

The commercial element, in truth, most successful. In the Spanish penin-sula a succession of wars culminated in infinitely more extended than the mere



THE CATHEDRAL, FRÉJUS.—SOUTH OR ENTRANCE FRONT.

back from the East by a long series of divisions by the lands of neighboring disasters, the adventurous spirits of the nobles, and surrounded by the pos-Middle Ages sought relief for their sessions of powerful vassals, whose energies in expeditions which were wealth and lands exceeded those of the purely commercial. The rich treasures king himself. It was an enormous and products of the far East excited advantage to the monarchy for the the envy of the West, and the maritime great barons to be actively engaged in nations, especially Spain and Portugal, distant lands. The king was quick to began sending forth trading expeditions seize the opportunities afforded by which culminated in the circumnaviga- these prolonged absences, and grew in tion of Africa and the unparalleled and strength and power daily. unforeseen results of the voyage of Columbus—the discovery of a New was not less important than the move-World. This last great undertaking ments of the Crusades. The cities of was a different application of the prin- Christian Europe were, before the ciples with which S. Bernard and Peter eleventh century, of two kinds, those the Hermit had stirred Europe, yet it that had to create their liberties, and chapter of that mighty spirit of adven- gained from Rome, had to re-create ture which characterized the whole of them. In Italy the movement towards the Middle Ages, and of which the political freedom resulted in the forthoughts to new channels.

sades were wholly local; failures, so eager enough to grant charters. And, far as the ultimate accomplishment of in truth, there is much reason to supnew life into the stagnant thought of the multiplication of communes. To the West, and notwithstanding their the city of Le Mans, which received tences, "made the fortune of the king," 1076, and then, in swift succession, fol-

control of the Holy Sepulchre. Driven limited extent, separated into several

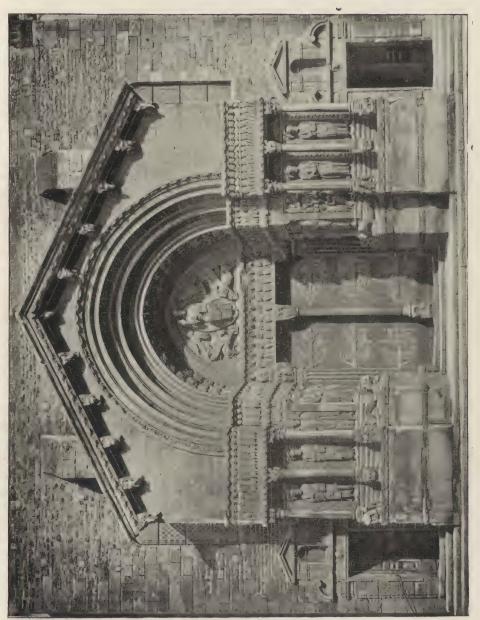
The development of the communes was nothing more than the closing those that, having lost the liberties Crusades were the first visible form, mation of veritable republics; in And as the commercial feeling grew France such a finality was impossible, and increased in strength, until it per- because while the cities might free meated every line of thought and themselves from the direct power of action, every art and science, every the feudal lord, it was impossible to product of human mind and hand, ignore the king. They could depose until it holds the world to-day in a their own lord, but the dignity of the firmer grasp than ever religion and art king, their lord's lord, was too great held the people of the Middle Ages, so for any conflict with it to be hopeful. interest in architecture and art changed All feudal lords, both spiritual and and they lost the places they once had. temporal, looked with disfavor upon And thus, among the causes which led the increased power of the cities, in so to the discontinuance of cathedral- far as it affected their own prerogatives, building, must be reckoned the voyage though when it resulted to their advanof Columbus and its great result, which tage, as in the founding of new cities so actively operated to turn men's in the neighborhood of their strongholds, and a consequent increase in the The benefits to Europe of the Cru- wealth of their domains, they were the end in view was concerned, they pose that profit to the king, from the stimulated trade, infused new ideas and sale of charters, was a potent cause in disasters and horrors, their rashness its charter in 1066, belongs the credit and ill-judgments set in motion almost of gaining the first commune. Two all the factors which made the Middle years later its charter was revoked, but Ages great. "The Crusades," says the example was quickly followed in Michelet, in one of his brilliant sen- other cities. Cambrai came next, in and in truth their importance in the lowed Noyon, Beauvais, S. Quentin, development of the royal power and the Laon, Amiens, Soissons, Reims, Sens, decrease of feudalism was of abiding Vézelay. Louis VI. signed nine acts consequence. At their beginning, the relative to communes, Louis VII. Royal Domain, France proper, was of twenty-three, Philip Augustus seventy-



TOWER, SOUTH FRONT, CATHEDRAL OF PÉRIGUEUX—BEFORE RESTORATION. Drawn by R. W. Gibson, Architect.



CATHEDRAL, ARLES. - WEST FRONT.



WEST PORTAL, CATHEDRAL OF S. TROPHIME, ARLES.

eight, Louis VIII. ten, S. Louis twenty. of men loyal to him and opposed to tial to their perpetuation. The move- ceived from the Crusades. ment, though widespread, was local. nessed the greatest successes of the buildings. communes; the fourteenth saw their With the exception of the brief reign tration.

circumstances. comed them as a means of weakening of Paris, Laon, Chartres, Bourges, the power of his vassals; and, in fact, Rouen, Soissons, Reims, Auxerre, Dijon, they formed a widely distributed body Amiens, Troyes, Coutances, Lisieux,

Powerful as the communes were in the the feudal lords. The French monpolitical life of the thirteenth century archy found as much strength in the they were without the stability essen- growth of the communes as it had re-

And with this extension of the Not until the time of S. Louis did French monarchy, with the foreign conordinances appear regulating the com- quests of French arms, with the beginmunes as a whole, and these acts were nings, for so it may be called, of French regulative, and administrative, not cre- democracy, came also the development ative. The communes, like the feudal of French architecture, and with it that lords, committed excesses; they suffered long train of subsidiary arts which from bad financial administrations and makes the Middle Ages so rich in artconstant internal divisions. Each com- istic remains. As the Crusades, the conmunity lived for itself alone, was interquests and the communes represented ested only in its own liberty and was un- new ideas, so did the architectural reaffected by the struggles of sister com- vival, which reflected the newly-found mune organizations, save as they may spirit of democracy in obtaining its have afforded pretexts for gaining most perfected forms in the Royal Domore for itself. They filled a political main. It is necessary to remember want of the time, and were helpful in this fact, since while the records of diffusing that local pride and feeling church building in France in the Midwhich found such wonderful illustra- dle Ages, and especially in the thirteenth tion in the great cathedrals. It was century, are extremely voluminous, they not until the fifteenth century, when the do not indicate a kindred state of archi-Third Estate was so called, that a tectural feeling throughout the whole widely diffused political feeling was country. The history of the monarchy developed among the people as a will quite well answer the purpose of whole. The thirteenth century wit- illustrating the contact of men and of

decay. The dearly bought liberties of Louis VIII., but three sovereigns, were not found as valuable in the end Louis VII., Philip Augustus and Louis as they had seemed in the beginning. IX. reigned at Paris from 1137 to 1270, a Laon, Cambrai, Beauvais and Reims period of one hundred and thirty-three struggled manfully to retain their in- years. The architectural development dependence long after many less im- -revival is not the word to apply to an portant communities had ceased to care art which had no equal in previous for them or make use of them. Meulan times—began under Louis VII. (1137 to in 1320, and Soissons in 1333, volun- 1180), from which time date portions tarily surrendered their communal of the cathedrals of Noyon, Laon, organization, and asked the royal Paris, Sens, Senlis, Soissons, Meaux, government to assume their adminis- Chartres, Rouen, Le Mans, Poitiers, Angers, Lisieux and Arras (destroyed). For just as the Crusades had The reign of Philip Augustus (1180 to strengthened the sovereign power 1223) was the golden age of Gothic so had the communes. The kings architecture in France, and one of the granted charters and encouraged the most glorious building epochs the world formation of communes, but they can- has seen. Though lasting forty-three not be called their creators. The years, the long reign of this prince was communes were the outgrowth of long quite too short to account for its enorsmouldering movements, to which the mous activity, save on the grounds of king simply gave voice by the force of extraordinary feeling and energy. From The sovereign wel- it date the larger part of the cathedrals

Tours, Le Mans, Evreux, Châlons-sur- orders. At no period, probably, was Marne, Dol, S. Brieuc, and Rennes the Church wholly free from so-called (destroyed). To the reign of S. Louis heretics, and so the few names like (1226 to 1270) belong portions of the Abélard and one or two others that cathedrals of Beauvais, Béziers, Quim- come down from this time need not be per, Clermont, Bazas, Bayonne, the assumed to indicate a special falling transept façades and nave chapels of away from truth. Yet, while the the cathedral of Paris, the choirs of heresies of the twelfth century were Bordeaux and Meaux, the cloister of individual as opposed to the heresies Tulle, the tower of Senlis, the apse of sects in the thirteenth, certain genchapels of Amiens and of Reims. And eral ideas were visible. There was a these are but a few of the typical build- rationalistic tendency in the Alps and ings of a time without equal in archion the Rhône, mystic on the Rhine, and tectural activity. Not all of these a mixture of the two in Flanders and cities, as we shall presently see, could Languedoc. It was a natural conseat that time be rightly termed French, quence of the religious fervor of the but incomplete as the list is it shows time, as illustrated in the Crusades, that how widespread was then the building men should evolve new ideas which activity throughout the land.

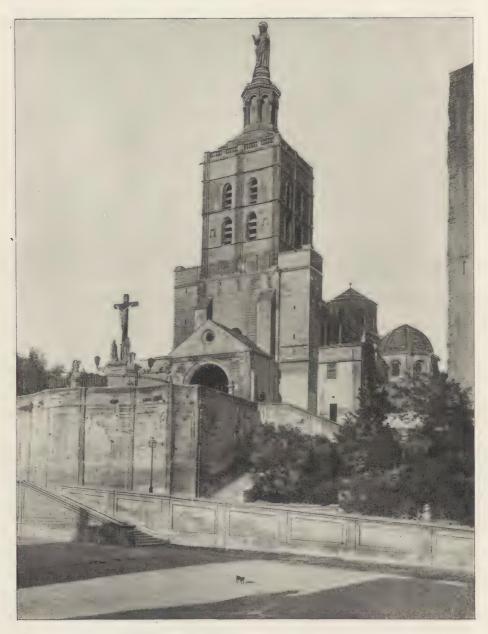
VI.

tecture which omitted all reference to significant event since the movement the times in which they were built, which gave woman her proper place in their history, their men, their events, the world was chiefly consummated in would fall far short of representing it this century. It was the era of chivalric in its true light. We may analyze the orders, of the Knights Hospitallers, construction, note the variations in type later known as the Knights of Malta, and in style, study the progression to-wards a final ideal, the relations to 1100, of the Knights of the Temple, other buildings, the influence upon the founded by Hugues des Peyens in 1118. architecture of other lands, but we In 1115 S. Bernard founded the abbey would not, at the conclusion of such a of Clairvaux, from which was to be desurvey, have gained the faintest insight rived so many important influences in into the real motives which lay beyond this and the next century. By the end the mere engineering or architecture of of the century the great abbey of these great monuments. The French Cluny counted its offshoots and affilcathedrals have a psychological and iated monasteries in western Europe historical interest which is not contained to the number of 2,000. The Uniin their physical properties nor to be versity of Paris rose to a supremacy it found in a minute cataloguing of artistic never lost, and the French language, details. Standing, as they do, as types of by the end of the first quarter of the an age, it is only by a study of the whole thirteenth century at the furthest, was time that they can be understood as all but the universal language of the expressions of human ideas-though world. The French of Paris was and their full value and meaning patriotic historian, became the capital realized.

The eleventh and twelfth centuries stand in marked contrast to the thir- the death of the Emperor Henry VI. monks, of Lanfranc and Anselm and Bernard. In the person of S. Bernard ful, perhaps the greatest of the Popes, the monastic orders reached their ulti- was chosen Pontiff in 1198. Yet so mate point of power. Education and swift were the changes of the time that politics were chiefly in the hands of the but three names, Gregory IX., Innocent

would be condemned as heretical by older authorities. In 1100 Robert d'Arbrissel founded the famous abbey of Fontevrault, the most important A survey of French mediæval archi- foundation of the time for women, a how else should they be understood?— proverbial. The royal city, remarks a of human thought.

The death of the century witnessed teenth. The earlier time was an era of (1197) and of Richard Cœur-de-Lion (1199); Innocent III., the most success-



NOTRE DAME DES DOMS, CATHEDRAL OF AVIGNON.



THE NAVE, FROM THE CHOIR OF THE CATHEDRAL OF AVIGNON.

that of Boniface VIII., whose humilia- parison with other eras to bring out its tion but shortly preceded the "Baby- strong points; though the culmination lonish Captivity" at Avignon (1305- and end of the Middle Ages, it is also most splendid development of the Pa- not the great rulers alone that made it pacy, and prepared the way for its great-though it was a veritable golden S. Dominic, of S. Thomas Aquinas, and was the combination of these elements, S. Bonaventura and Albert the Great, the union of all the mighty forces of Blanche of Castile in France, of Ed- that follow it. ward I. in England, of Ferdinand III. in Spain and of Frederick II. in the nation of so many new and strange claims for a voice in the general gov- of Roger Bacon and of Dante, which beginnings of civil jurisprudence.

Germany, Flanders, France and Eng- in contemporary occupations. expansion and solidification of sover- but an expression of it. eign power, in the position of the advantages, and in methods of educa- Hundred Years' War, during which tion, there were broadening tendencies architecture, as well as other progressand constant growths which are the more ive movements, were at a standstill. Middle Age centuries, can boast. But under the influence of a new time.

IV., and Gregory X. separates his from the thirteenth century needs no com-The century which saw the the beginning of modern times. It was sudden though not complete collapse, age of kingly kings-nor its leaders of was the century of Roger Bacon and men, nor its thinkers, nor its colleges, of Dante, of S. Francis of Assisi and of nor the beginnings of popular rights: it of Duns Scotus and Raymond Lull, of this mighty time that raised it above Stephen Langton and Simon de Mont- previous times, that make it stand fort, of Philip Augustus, S. Louis, out even from the greatest centuries

This period which saw the combiempire. It was the century of parlia- elements, which witnessed Crusades mentary growth, not alone of the asser- against infidel and Christian, which tion of rights by the people, but of heard the voices of S. Thomas Aquinas, ernment. The extortion of the Great saw the king of England lose greater Charter from John of England (1215) possessions in France than the king at was the most momentous event in con- Paris had, which saw the culmination stitutional history. Castile and Arra- of the Papacy, and nearly saw its fall, gon had had their Cortes in the twelfth in which began representative governcentury; at the end of the thirteenth ment and secular schools, in which a England, France, Germany, Sicily, the king of England died hated by his sub-Swiss had each their representative jects and despised by his enemies, and bodies. With these new forces in the in which a French king died in the odor stability of governments came also the of sanctity, the last emblem of the Middle Ages, giving French royalty a Towns increased in number and im- religious authority and prestige for all portance. In the previous century the time;—the time of these events was the richest cities were in Provence and time also of a great artistic revival, Languedoc, in Italy and in Spain. At whose wonderful invention, exquisite the close of the thirteenth century rich grace, deep religious feeling, and marmanufacturing and trading towns had velous mechanical execution made it a spread over the whole of Europe, in fit expression of the ideas prevalent land. In wealth and in power the architecture of the thirteenth century cities of the north bid fair to surpass, cannot be separated from its intellectual as they did finally, those of the south. growth; it is not only an illustration of On every point, in government, in the the intellectual feeling of the period,

And then, in the fourteenth century people, in trade, in law, in educational came the blighting influence of the marked from contrast with the time When this conflict was ended, and immediately preceding. Even the cen- architecture endeavored to continue in turies which saw the awakenings of the the fifteenth century the progress it had Italian Renaissance can scarce show made in the thirteenth, the old spirit was the changes that this, the last of the lost, though the forms had not yet fallen



CATHEDRAL OF BÉZIERS.

CATHEDRAL OF AGDE.

VII.

pansion from within 'outward; in a of the counts of Toulouse. word, a true national growth. And this history is the more remarkable France dates from the eleventh censince the dominions of the kings of tury. The lands of the English then Paris, in whom the French monarchs occupied almost the whole of the had their origin, were, at the beginning, western part of modern France. of the utmost insignificance. The do- stands as one of the most remarkable main immediately and properly belong- facts in mediæval history, that the ing to the king of France was, under French sovereignty should not only Louis VI., the Ile de France, a part have survived against odds that at one of Orléanais, and the recent addition time seemed overwhelming, but that it of French Vexen, comprising scarcely should have overcome them and prosmore than the present five depart- pered in so doing. The aggrandizeet-Marne, Oise and Loiret. The counsorbed Gâtinais in 1068 and the Vistry we now know as France, and call county of Bourges in 1100. Under the close of the mediæval period, and much more considerable. Beginning in some instances much later, in the with the additions of Vermandois and erful than the king, to whom they were saw, for a time at least, Valois (1183), independent position. First of all, directly to the royal domain. Some of therefore, the development of France these provinces afterwards passed offers an impressive lesson in the again to foreign hands, chiefly to the strength of the feudel power in the King of England, but all were finally once saved it from extinction at the illustrating the powerful impulses to-

empire of Charlemagne in the last century, though as yet it was a nagreat division in 887: Karlingia, the tionality of the crown, not of the Teutonic Kingdom, and the Kingdoms people. Under S. Louis the greater of Burgundy and of Italy. Of these part of the county of Toulouse was the last three became again the Empire, absorbed, Béziers, Narbonne, Nîmes,

but the westernmost kingdom retained its independence and grew, in time, to No state of Europe offers so ex- be modern France. But even at the betended and interesting a study in ex- ginning it was not a homogeneous pansion as France, nor does any other whole; it included several divisions of state exhibit such a picture of national which the chief were Western Francia, development. Unlike the other states Britanny, Aquitaine, Gascony, the of central Europe, France began, it Spanish March, Septimania, the duchy might almost be said, independently of of Burgundy-distinct from the kingthe Empire, inasmuch as the sover- dom of that name—and Flanders. The eignty did not derive its rights from it; map of Europe changed quickly in these and it not only maintained this inde-pendence, but became, in time, the most dred years later Western Francia, propformidable rival of the Empire. The erly termed France, was diminished by history of France is not, therefore, a the great independent duchy of Norhistory of a struggle against a sov- mandy; Aquitaine likewise suffered ereign power, as is the case with most through the growth of Gascony and the continental nations, but a history of ex-rapidly increasing extent of the domains

The beginning of the expansion of ments of the Seine, Seine-et-Oise, Seine- ments began under Philip I., who abby that name, was for some time after Philip Augustus the additions were hands of great nobles, often more pow- Amiens, in 1183, the reign of this prince united only by feudal ties; or else the Artois (1180-1187), Touraine, Anjou lands were in the possession of foreign (momentarily 1137-1152), Maine, Poiprinces whose respect for the feudal tou Saintonge, and Normandy (1202relation was greatly diminished by their 1205), and Auvergne (1209) brought Middle Ages. The dignity of the kingly absorbed into the French kingdom. power, rather than its might, more than The present dates are important in hands of powerful and haughty vassals. wards nationality which began to be Four great states were formed of the manifested in France in the thirteenth

Albi, Velay and some others (1229), Roussillon and Barcelona, being, at yond the cathedral building era. It is the same time, freed from French con-well to note, however, since most of trol. The city of Toulouse was not these lands contain churches now genkingdom was only completed in 1361.

purely and originally foreign was mon bond. brought under the rule of the French crown. The marriage of Anne, heiress sovereigns and the various lands ultiof Britanny, to two successive French mately absorbed in their dominions kings, Charles VIII. and Louis XII., were of a varying nature, depending added the last province of western not alone upon geographical position France to the crown (incorporated, or feudal connection, but ofttimes upon 1532). The sixteenth century saw also the personal character and wealth of the absorption of Comminges (1548), the tributary lord. Most of them were the three bishoprics, Metz, Verdun and the lands of vassals of the crown itself. Toul (1552), and, as the patrimony of though it would be hard to more dis-Henry IV., Béarn, Navarre, Bigorre, tort the truth than to say that in gain-Foix and Armagnac (1589). To coming these lands the crown was simply plete the story it should be added that taking unto itself its own. Of these Calais was finally regained from the were Gâtinais, Amiens, Vermandois, English in 1558, eight years after Bou- Valois, Aquitaine, Normandy, Anjou, logne had passed into the hands of its Maine, Touraine, Toulouse, Blois, rightful owners.

The additions to France in the seventhe Spanish possessions of this house, teenth and eighteenth centuries are begained until fifty years later. This erally recognized as French cathedrals, king also added Blois and Chartres that Bresse, Bugey and Gex were added (1234), Gévaudan (1255), Perche in 1601, Alsace in 1648, and Roussillon (1257), and Mâcon (1239). The reign and Artois (1659), which has passed of Philip III. was marked by the com- from the crown to the duchy of Burpletion of the absorption of Languedoc gundy. Later additions included Bar (1270). The marriage of Philip IV. (1661), Nivernois (1665), Flanders and with the heiress of Champagne and Hainault (1668), Franche-Comté (1674), Navarre brought these two divisions Strassburg (1681), Charolais (1684), under the royal control (1284). Navarre Lorraine (1766), Orange (1714-1771), was separated off in 1328, while the Avignon and Venaissin (1791), and incorporation of Champagne with the finally Savoy and Nice by Napoleon III.

(1860).

The Hundred Years' War, which Dry as these geographical facts are, ended in the final annexation of Aqui- they are of value in emphasizing the taine to France, as well as most of the fact, important to remember in conposts held by the English, and which sidering French cathedrals as a whole, was so disastrous for cathedral build- that the churches we now call French ing, was the next great episode in the were not all built under the rule of the growth of the monarchy. The struggle French crown, and thus all are not, well-nigh resulted in the extinction of whatever be their present status, the French crown, but Charles VII. was French cathedrals in the strictest geoultimately successful (1451-1453) and graphical sense. We are right in so callunited southern Gaul to northern, and ing them from our modern standpoint. with this was the real formation of but the conditions under which many modern France. The duchy of Bur- of them were built were not the condigandy, which escheated to the crown in tions which led to such splendid results 1361, and for which a new dukedom in the royal domain. These were, was at once created, was not finally ab- in very truth, French cathedrals, and sorbed until the death of Charles the as we proceed in our study we will find Bold (1479). This eastward extension, how much they influenced the churches with the addition of Provence by Louis of other parts of France, and thus XI. (1487), is especially noteworthy, understand how, in a certain sense, all since, for the first time, soil which was French cathedrals are united by a com-

The relations between the French Chartres, Perche, Mâcon, Champagne,

and Venaissin. Gex were obtained in exchange for had begun to pass away. Saluzzo. French vassals were vassals to the Gothic. King of France and a foreign sovereign The geographical limitations were south and west may be roughly stated than in the distant fiefs of the south, or to have been French territory, ruled by the foreign lands of the east and south-French lords, vassals to the king. The east. Thus the cathedral of Chartres, acquisitions to the east of the Rhône, which is unquestionably a French cathewhole, foreign dominions, which only that, was mostly built prior to the became French after annexation. And absorption of the county by the crown. once rich and thriving land are more Lisieux, partly built while Normandy clearly and indisputably foreign than was practically an independent duchy, those elsewhere within the boundaries exhibits characteristics closely similar of France.

VIII.

drals are found more frequently in the though it may be considered as having

Artois, Burgundy and Flanders. In south than in the north, and in a better time, indeed, Aquitaine, Flanders and state of preservation, in that they have Artois were relieved of their homage to not been rebuilt in a later style, the ex-France and thus, for a time, became planation is to be found in the fact, not foreign. Their absorption at last may alone that the Romanesque was a style be classed with the final acquisitions of peculiar to the south, and the Gothic France. These comprised, after some peculiar to the north, but that the lands shiftings back and forth, Roussillon, of the south were cut off from those of that part of Navarre north of the Py- the north by political as well as by rénées, the kingdom of Burgundy or, geographical ties, and this at a time rather, such parts of it as fell to when the cathedral building spirit most France, Dauphiny, Provence, the three filled the hearts and minds of the men bishoprics, Alsace, Franche-Comté, of northern and central France. When Strassburg, Orange, Lorraine, Avignon these lands were finally absorbed by Bresse, Bugey, and the crown the era of cathedral building Britanny, which, before its Romanesque cathedrals of the south incorporation, was more foreign than show more alterations and changes Britain itself, was a fief of the duchy after the Gothic period than during it, of Normandy. Only the chief divi- where restoration or change has been sions have been considered in this list, needed, while in the north the lands which does not show the varying ex- which earlier came directly under the tent of the lands of the states and vas- sovereign received new and larger sals absorbed, nor indicate how some churches in the new style we call

This much is clear, however, much less keenly felt in the fiefs imthat the additions to France on the mediately adjoining the royal domain on the other hand, represent, on the dral, and a thoroughly French one at the cathedrals which thickly dot this So also the Norman cathedral of to those of the royal domain, and this notwithstanding the fact that it received its final form after the annexation. Even more striking is the testimony The historical geography of France supplied by the cathedrals of Britanny is not only in itself of interest in study- built during the thirteenth century, ing the cathedrals of that country, but it especially S. Pol-de-Léon and Quimper, is of value in estimating the influence which rightly pass as splendid and of French culture and ideas upon archi- superb specimens of Gothic architecture, and especially upon cathedral tecture; not perfectly so, as Mr. Moore building. There is no better way to defines it in his book on "The Characimpress upon the mind the cardinal ter and Development of Gothic Archireasons for the wide divergencies ex- tecture," but much more so than any isting between the cathedrals in the cathedral in the south of France. This different parts of France, than to briefly is the more remarkable from the geoglance at the historical geography of graphical standpoint, since Britanny the country. If the Romanesque cathe-only fell to the French crown in 1532,

previous.

geography of the country, or even to fully comprehend the significance of the feudal relationships it once exhibited. One is loath to admit, to quote waging private war, of exemption from an instance just cited, that so glorious public tribute save feudal aid, freeof Chartres is not wholly French from exclusive exercise of original judicabeginning to end, albeit much of it is, ture in their dominions. Into the histhe admission. strictly French-not in the sense that keep these privileges in mind, since and dukes of Reims maintained suffi- tween the dates of the cathedrals and coin their own money as late as the or city, as the case may be, into the close of the fourteenth century. The domains of the crown. distinction in this case, however, is In the light of historical geogra-scarcely a just or fair one, since, if the phy, no cathedral of France is strictly ecclesiastical lords of the city and adja- French save those erected in the royal cent territory retained a quasi-political domain, or built after the province independence, their position among the or fief had fallen to the crown. Many French peers brought them into close of the latter are buildings comparacontact with the crown. The further tively modern, or at least dating not fact that from their hands the succes- earlier than the sixteenth century. And sors of Clovis received the sacred oil, as the cathedral, in its truest and and that in their great cathedral the finest sense is essentially a building of French kings were crowned—a cere- the Middle Ages, these may, for the mony which, in the seven hundred present at all events, be passed with-years elapsing since the crowning of out notice. Such are the cathedrals Philip Augustus (1179), was omitted in of Alais, Annecy, Arras, Auch, Blois, the case of but three sovereigns, Henry Belley, Cambrai, Castres, Dax, Gap La IV., Napoleon I., and Louis XVIII.— Rochelle, Marseilles (new), Montauthus giving it a national interest pos- ban, Montpelier, Nancy, Nice, Orsessed by no other church, renders the léans, Pamiers, Rennes and Versailles; distinction more arbitrary than real or not all wholly modern cathedrals, it is even necessary.

land we call France correspond to no changed in modern times. political condition of the present day. group which may be neglected at this Some, as Burgundy, Aquitaine, Tou-time are those cathedrals, whether louse, Flanders and Normandy, though mediæval or modern, which only behistorically Normandy scarcely belongs came cathedrals in the present century, to this group, may be termed national and were, therefore, erected without fiefs, whose sovereigns maintained inde- thought of their present use. Such are pendent courts and usurped powers and the cathedrals of Agen, Dijon, Laval, functions which made their submission Moulins, S. Claude, S. Denis, S. Dié, to the kingship more nominal than real. and the cathedral of the lower city, the Others, as the counties of Anjou, Char- Ville-Basse, of Carcassonne. tres and Champagne, were closely con- others we shall find in the progress of

been partially French for some time nected with the crown, and their counts were known as immediate tenants. Con-It is hard for the modern mind, with sidered as a whole, the fiefs of the the map of modern France before it, to French king enjoyed rights and privirealize the meanings of the historical leges which, in the modern conception of the state, were incompatible with organic union with it. These included, chiefly, the right of coining money, of a French monument as the cathedral dom from legislative control, and the yet the stern facts of history compel tory of the absorption of these rights Even the wondrous by the kingship we need not enter, but fabric of Reims, the mightiest and in attempting an historical classification grandest of mediæval churches, is not of the French cathedrals it is well to Amiens, or Paris, or Bourges may they help to show, as nothing else can, rightly claim to be, for the archbishops the importance of the relationship becient independence of the crown to the dates of the absorption of the fief

true, but some wholly so, some largely The crowd of fiefs which filled the rebuilt and added to, some completely Another cathedrals, but they were so changed or Trois-Châteaux, S. Pol-de-Léon, Sarlat, Thérouanne.

Coutances, Entrevaux, Laon, Lucon completed. (chiefly), Mende, Narbonne, Noyon, Many of ecclesiastical lords reduces them, France.

Comminges, S. Brieuc, S. Jean-de- Carpentras, Chartres, Die, Digne (pres-

our survey were not originally built as Maurienne, S. Malo, S. Omer, S. Paulenlarged during their cathedral history, Senez, Sisteron, Tarbes, Toul, Tréguier, or have had episcopal rank for so long Tulle, Uzès, Vaison, Valence, Vence, a time as to make their geography of It is not strictly accurate to speak of some moment. But churches such as all these churches as foreign. The those just named, which have been cathedrals Fréjus, Aix and Arles are chiefly created cathedrals within the not entirely so; Vaison has been memory of living men, form a group much restored since it passed into whose geography or history need not French hands; Lescar has been much be now considered. Neither need we restored in the Renaissance style; but concern ourselves with the ruined or broadly speaking we are justified in wholly destroyed cathedrals of Alet, designating them as foreign churches as Antibes, Avranches, Boulogne, Eauze, distinguished from French. The cathe-Mâcon, Maillezais, Riez (rebuilt in the dral of Angoulême, though practically present century), S. Servan (Aleth), rebuilt and restored in the sixteenth and seventeenth centuries, and again The cathedrals wholly French, his- from 1856, should be added to the list, torically and geographically, when as well as the cathedral of Angers. viewed in the strictest sense, form but The latter city, though nominally a small fraction of the entire list. annexed to the crown in 1203 was These include Albi, Amiens, Bayeux, only finally absorbed in 1475, after Bourges, Clermont-Ferrand, Condom, the cathedral had been substantially

Many of the cathedrals of Guienne Paris, Rieux, Rouen, S Flour, Séez, and Gascony, which were alternately Senlis, Sens, Toulouse, Vabres. Beau- in the hands of the French and vais, and Reims should architecturally English, are of a mixed nationality, be grouped with Paris and Amiens, yet which renders a classification on this the semi-independent position of their basis well-nigh out of the question. Thus, though Touraine was confiscated strange as it may seem, to the mixed by Philip Augustus in 1203, the city of group. The links which bind these Tours was not under the royal control churches together are political; the until 1242, and its cathedral is, therearchitecture of the north had not, in fore, in some small part, partly English the thirteenth century, penetrated to as well as French. The same condition the south, and no two cathedrals could exists in the cathedral of Poitiers, well be more different than those of nominally French in 1203, actually Paris and of Albi. But all of them so in 1453. Viviers also, to cite have a common political brotherhood but a single further example, became possessed by no other churches in part of the royal domain in 1307, though the fief was absorbed in 1270. The foreign cathedrals—those built Neglecting, therefore, for brevity's prior to the complete absorption of sake, any further consideration of the the city or state by the crown-form a historical vicissitudes of the French much larger list, though of very differ- cities and their cathedrals, we find ent architectural importance. These many that should be classified as partly are the cathedrals of Agde, Aix, Arles, French and partly foreign, the latter Autun, Avignon, Besançon, Bourg, term including, for present general Cahors, Cavaillon, Châlons-sur-Marne, purposes, lands actually obtained from Châlons-sur-Sâone, Chambéry, Digne foreign sovereigns and lands held in (former), Dol, Elne, Embrun, Fréjus, fief of the French crown. The list is Grasse, Le Puy, Lescar, Lodève, Lom- a formidable one, including as it does, bez, Maguelone, Marseilles (old), Mire- in addition to those just named, the poix, Moutiers, Nevers, Oloron, Orange, cathedrals of Aire, Apt, Auxerre, Périgueux, Quimper, S. Bertrand-de- Bayonne, Bazas, Béziers, Carcassonne,

ent), Forcalquier, Grenoble, Langres, flect the times and circumstances in Lavaur, Le Mans, Lectoure, Limoges, which they were erected; there can be Lisieux, Lyons, Meaux, Nantes, Nîmes, no greater error than to look at them Perpignan, Rodez, Saintes, S. Lizier, as examples of architectural art without S. Papoul, S. Pons-de-Thomiéres, Sois- reference to co-ordinate events. Their sons, Toulon, Troyes, Vannes, Vienne, meaning and importance only become Verdun. Evreux, which finally fell to clear when their whole environment is the crown in the sixteenth century, considered. It is this fact which gives was largely built while attached to the value to the study of their geography.

in the light of historical geography tion to the royal domain and the near-and its own chronology, many in- by fiefs. stances would be found in which the actually French.

study in showing the very varied polities much more difficult to understand ical and historical condition under the almost independent position of the which they were produced. These feudal fiefs which once formed the

royal domain between 1199 and 1305. The historian and the geographer might The cathedrals of France are spread take satisfaction in the classification over so wide an extent of territory, they given above, but the archæologist were erected under such varying con-would find just cause for questioning it. ditions, politically and ecclesiastically, Architecturally, French cathedrals are that no single system of classification not those that have been named as on an historical or geographical basis erected directly under the crown, but can be literally adhered to. That just those inspired by the true French spirit, proposed is, at its best, but a make- of which Notre Dame at Paris is a shift illustration of the geographical notable example, and Amiens, Beauvais, relations of the cathedrals to the sov- Chartres and Reims further illustraereignty. In a certain sense it is mistions. These were, as has been said, leading to speak of all these churches, really French cathedrals, and they are as partly foreign and partly French, so without any reference to geography since the former element is, in many of or history because their sources of them, of the utmost insignificance, inspiration were identical and their Normandy, for example, was confiscated architectural forms akin. This French by Philip Augustus in 1203, and the be-spirit was so strong that it passed the ginnings of the cathedral of Rouen date barriers of independent fiefs, especially no earlier than 1201 or 1202. But as it those close to the royal domain, and, as includes some parts of an earlier editime passed and the crown lands infice it cannot, in the strictest his- creased in extent, it spread throughout torical sense, be termed a wholly French the greater part of France, diminishing church. The county of Chartres, in vigor with the distance and with the though obtained by purchase by S. time, until the exhaustion of wars and Louis in 1233, was given by Philip the the collapse of Gothic architecture ex-Fair to his brother Charles of Valois in tinguished it forever. It is not to be 1346, and was only received again by supposed that in the thirteenth century the crown in 1528. In this case, how-ever, in which the fief was given up to ceive and build in the new style, but a prince of the blood royal, it can there can be no doubt whatever but scarcely be said to have become foreign that the light furnished by the historical territory. And so if space were at hand geography of the kingdom helps mateto examine each church individually rially in explaining its practical limita-

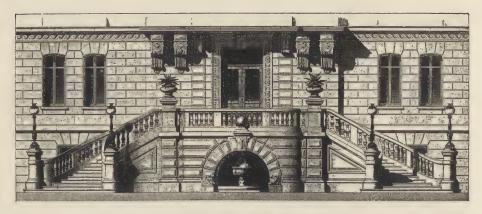
In looking at our modern maps members of this mixed group would be we are apt to forget, unless we open more properly classed as French, since our history books, that Orange and the more important parts of their fab- Avignon, towns we would now describe rics were erected in times wholly and by no other name than French, had no connection with the kingdom until the The geography of the French Cathe- Revolution. While no fact in history drals is important in any preliminary is more readily ascertained than this it buildings, as do all other buildings, re- larger part of French territory. A

piece of land which has been unques- of both these lands to the mother counadjective of British. Yet the relations prehended at the outset.

tionably French for five hundred years try and government of England is seems always to have been so, espe- closer and more intimate than that cially when its rulers appear to have which existed between the county held their holdings at the pleasure of of Chartres and the kingship of France, the French sovereign. But there is or between the kingship and any of its nothing in feudal history to warrant feudal fiefs at the time when many sosuch a conclusion, however natural it called French cathedrals were building. may seem to modern minds. The history of the epoch we are considering needs to be interpreted by the foreign, from a history of the cathelight of its own day, not by the light drals of that country, nor shall they be of the present. No one thinks of call-rejected in the present narrative, but ing the cathedrals of Scotland and Ireland English, or even by the broader their historical geographical and political model. The property is their historical geographical and political position should be thoroughly com-

Barr Ferree.





AN ENTRANCE ON BOIS DE BOULOGNE, PARIS.

THE MODERN HOUSE IN PARIS.

fication of the re- to

the stream, from East to West.

The Empire bequeathed to the Republic vast projects of improvement and many plans for quite a number of long thoroughfares to be opened up, both in the overcrowded districts and in outlying, sparsely-inhabited parts. The well-known Baron Haussmann was connected with the execution of these schemes, and he was followed for twenty years by his successor, Mon-

OR the past twenty principally comprised between the years Paris has un- Champs-Elysées, the fortifications and ceasingly grown the Bois de Boulogne, caused the walls larger and, in justi- which surrounded Paris to fall, so and pushed the speak, mark that has been out to the country, while made as to all large increasing facilities of communicacities situated on tion accustomed the Parisian, who the banks of a river, its development loves the green sward as much as the has taken place in the direction of the wood pavement, to feel still chez lui or flow of the Seine, that is to say, down at home when outside those walls, where he formerly considered himself in a lost land.

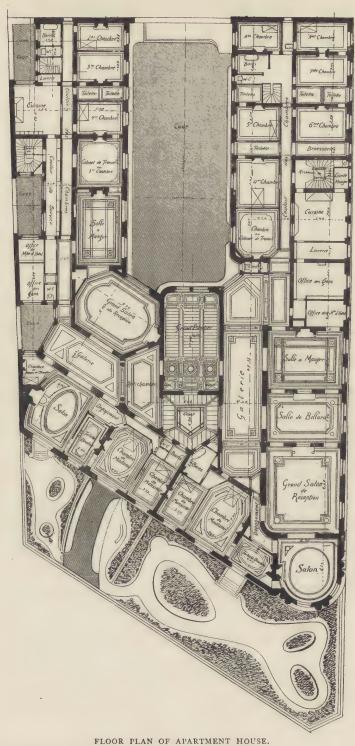
To this is due, in a certain measure, a notable change in the habits of our citizens. On the one hand, numbers of well-to-do middle-class people who previously lived in apartments have come to desire a house in the suburbs, wherein, though small, they may have all to themselves—where the grass may belong to them, where, in short, they sieur Alphand, to whom the City of may be the owners. On the other hand, Paris accorded, two years ago, a public by reverse action, the happy possessors funeral, the splendor of which bore of substantial fortunes, members of the testimony to her gratitude. The car- financial and commercial world, and rying out of so grand a programme even of the nobility, who had had, or made glad the hearts of building con- could have had, a hôtel (private house tractors and all those whose trades or mansion), decided, owing to the were connected with the construction dearness of building lots in the fashionof houses. It proved the truth of the able quarters, to live in apartments, popular saying, "Quand le bâtiment with neighbors above and below, withva, tout va" (When the building trade out, however, having any intercourse is good, everything prospers). Every- with them, except, of course, a polite thing, in fact, did prosper; the almost greeting when they meet them on the instantaneous erection of new districts, common staircase. In this way, on the Avenue du Bois de Boulogne and in forms an angle-the remarks as to the the Malsherbes, Franklin, Monceau, one being applicable to the other. and François Ier districts, residential apartments constitute veritable small mansions, one placed above the other. It is there that at the present time we residence, combining every modern him on the same landing, to make him cares incumbent upon a house-owner.

modern French residence, and in order unnecessary. the first. new, stands at the corner of the rue de Let us examine each of them. la Pompe and the Avenue du Bois de Boulogne, while the one being built is dwelling, that which one loves to beauat the corner of the same. Avenue and tify for oneself alone, that which is the the Rue Chalgrin. (See page 329.)

give the plan, belongs to the "Phénix," is the sanctuary in the modern temcourt-yard. We will examine the dis- in length by five in breadth, which position of only one of them, that which insures a plentiful supply of air.

The building measures 25 metres in houses have been built wherein the height, and has four floors in addition to the ground floor. After undergoing the scrutiny of the concierge (janitor), who no longer inhabits the traditional meet with the real type of Parisian loge, but lives in a veritable small apartment, you find yourself in a vestibule comfort and convenience, all the ornamented with pillars, marble and numerous arrangements to charm the mosaics, from which ascends a stone sight and make life pleasant, to isolate staircase 6 metres in width, flanked by each tenant from contact with those two elevators. When you have rung above and beneath, to separate him the door bell and the footman has adalso from the family living alongside mitted you, you reach a hall, 21 metres long by 41/4 metres wide, lighted by two forget that in one of these horizontal windows which look out on a large slices of house superposed like a chest of court-yard and another smaller one. In drawers, he is not entirely chez lui, and, order to meet the desire now maniin a word, to produce as far as possible fested everywhere that each tenant the illusion of being in his own house, shall be isolated from his neighbor, and while sparing him the burdens and for that purpose to hide all view of him, these windows are furnished with It is, therefore, from one of these new stained glass, with polychrome designs districts that I have selected the speci- on white glass ground, slightly tinted. men that I consider best calculated to This shuts out indiscreet glances, and give a just idea to an American of the gratifies the eye, while making curtains From this gallery or not to be suspected of laying before the small hall, which is the central point, reader of The Architectural Record all parts of the apartment can be something that has already grown old, reached. Every dwelling, whatever it I have not hesitated to choose a house may be, consists of three entirely disstill in course of construction. The tinct parts, which rank according to exterior of this class of large build- their importance in the following order: ing varies but little; consequently first, the part reserved to the heads of there is no objection to giving the ele- the household and their family, and vation of another house which is only then the part devoted to the reception about one hundred yards distant from of friends and visitors, and lastly, that This house, which is quite which comprises all the domestic offices.

The most private chamber in all the home of the home, is the bedroom. This, The latter building, of which we like the cella in the ancient temple, a large insurance company and a ple. The profane never enter there. A great builder of houses. Nothing has Frenchwoman loves to be in her been neglected to make it the most bedroom, and passes many hours perfect specimen of a modern residaily there; therefore it is natural dence. Two blocks of buildings, com-that it should be the most attractive prising two series of apartments, are position, and so we find that it occupies contiguous to each other, but only the principal place, fronting on the communicate by a common staircase, avenue and not on the street (chambre while they are separated by an interior de madame). It measures seven metres



Avenue du Bois de Boulogne and Rue Chalgrin, Paris.

The chamber of Monsieur is near, is of circular form, which has the evi-"Parisienne" is a momentous matter. Boulogne. It is there that Madame adorns herself ceived during the toilet, but are ad- out upon the Rue Chalgrin. is open to all, well indicates the place metres in length. tion.

is in the raised wing at the angle, and fanciful creations of an art, which all

as it should be. It is not so large dent advantage of being free from coras the preceding one, because gal- ners. It thus seems to make everylantry demands, which also is as it thing converge towards a certain point, should be, that it is he who must take namely, the mistress of the place. the trouble to pay visits. Business There she holds her social court, either keeps him away from home during the once a week from 2 to 7, or perhaps day, or if it retains him in the house a daily from 5 to 7. Since the English study is fitted up for him in another mania has spread among us, 5 o'clock corner of the apartment beyond the tea is quite the fashion, and daily reliving rooms. One bath-room (Bains) ceptions, at which the refreshing beverserves alike for the two heads of the house. A large dressing-room adjoins the hour which in summer is devoted Madame's bedroom, for the toilet of a to the invariable drive to the Bois de

But this drawing-room, in spite of its or wards off, with the help of hair- considerable dimensions, 6.55 metres dresser, pedicure, manicure and other by 6.30 metres, soon becomes too small charm-restorers, the onslaughts of when, to the friends one loves to bring time. In the last century ladies will- together, are added the crowd of acingly let themselves be seen in the quaintances whom it is useful now and deshabille of their natural beauty or then to receive, and who correspond while engaged in their personal adorn- to the third degree in the hostess's ment; this was the fashion of the day circle. To these a second drawingin the same way as it was considered room (Grand Salon de Reception) is algood form for people of quality to go lotted, larger than the first, and to to bed surrounded by a numerous com- which at ordinary times it serves pany. In our day ladies do not care to as vestibule. At the end we find risk such an ordeal. Fashion, however, a billiard-room, and out of this seems to be returning to the habits of we get to the dining-room (Salle à former times; visitors are no longer re- Manger). These three chambers look mitted to the place where it has been was in fact no objection to their performed, which is a refinement of sug- giving on to this secondary thoroughgestiveness. The Toilette-Boudoir, as fare, as they are principally used in we find it in the house of which we the evening, with artificial light. speak, is reserved for intimates; it is One opens into the other through an elegant little room, which by its in- folding-doors, which on reception termediate position between the closed days are taken down, forming a bedroom and the drawing-room, which vista and a clear space of about 30 The dining-room occupied in the family's estimation by communicates on the one hand with those whose privilege it is to be admit- the reception-rooms and on the other ted there. It is for such persons a flat-tering distinction which predisposes ler's pantry is next to the dining-room. them, according to their age and sex, It is here that the successor of the to greater cordiality of manner, or, if "Officier de la Bouche" of the ancient so inclined, to indulge in a mild flirta- monarchy presides over the preparations of the meals. Here, in this Only the initiated enter the boudoir, calm retreat, under the orders of and Madame is always "at home" to the mistress of the house and with the them. The drawing-room (salon), which aid of the chef, he concocts his menus, adjoins, is used for friends of the second forms his plans and prepares for his degree, those who only call on days victories. It is here that, previous to when Madame receives "officially." In the repast, he dresses those "chaudthe house in question the drawing-room froids," those pastries and the thousand

Europe, it is said, and I believe all America, envy us. Through one door he keeps an eye on the dining-room, through another he watches over the servants' hall, situated beyond, where the valet of Monsieur and the footman of Madame assist at dinner time in the many duties connected with the table. The servants' hall also serves as a dining-room for the domestics. Next comes the scullery, where the silver,

glass and china are cleaned.

We now reach the kitchen, the cook's laboratory, in which the secret of sauces is kept as closely as certain brotherhoods keep the recipe of some specific cure for wounds. If history is to be believed, it is by means of her cooks, her dancers and her comedians detail, we must confess that until about that France has built up her reputation as much as by her artists and men of science. Consequently, it is not astonishing that in the Modern House the kitchen covers a space of 5.40 by 5 meters, as large as that of a drawingroom or of the mistress's bedroom. Around the walls, which are lined with glazed tiles, there are: a large fireplace with a turn-spit, a number of ranges, racks for the utensils, hot and cold water taps, a reservoir of filtered water, etc. A large table occupies the centre marble in order to facilitate washing.

Although it is agreeable to have servants, it is not so pleasant to come into contact with them in the corridors. Therefore the architect has taken care to separate entirely the rest of the residents from the square portion devoted to the service. The kitchen, scullery and servants' hall are only connected with the rest of the apartment by a small door within view of the butler's pantry. The servants have a staircase to themselves, and this staircase is provided with an elevator which brings up the provisions and lands them discreetly in the kitchen. By means of this isolation one of the in an apartment is averted—an inconvenience which is avoided in private houses consisting of several floors, system. where the underground rooms and the garrets are devoted to the use of the style was infashion, graceful, but somedomestics.

Only a short time ago the Louis XV. what irregular in form. There now

From the galerie of which we have spoken and which serves as entrance hall, a corridor runs, 22.85 metres long by 1.27 metres wide. It divides the building, abutting on the street, into two parts. Opening into this corridor, which runs behind the kitchen and offices, is a series of bedrooms, which complete the portion of the apartment occupied by the family. These bedrooms, seven in number, are all accompanied—except two rooms, one of which serves as a study for Monsieur, and the other as linen-room—by dressing-rooms supplied with hot and cold water pipes. A bath-room and a water-closet complete the installation,

If it is allowable to dwell upon this twenty years ago, water-closets were treated in many of our best houses without due regard to comfort and health. It was a necessity that people seemed unwilling to admit, and one that they neglected. In this connection, an abundance of water is indispensable; but the difficulty was not in bringing in the water, but rather in carrying it off, and the water soon filled the cess-pools, which the landlord was required to clear. The present system of "tout à l'égout," by abolishing fixed cess-pools, of the room. The floor is paved with has made landlords less parsimonious of water and induced them to provide each closet with a good flow, which insures the constant cleanliness of the pipes and prevents unwholesome odors.

A hot-air heater, placed in the cellar and maintained at the landlord's expense, warms the staircase and each of the five apartments. This stove also supplies hot water for the dressing and bath-rooms at all seasons and at any hour of the day or night. The electric light illuminates the reception rooms, the hall, the bedrooms and the diningroom. In the offices, gas is used. the bedrooms communicate with the offices by means of electric bells.' A telephone connects the offices with the great inconveniences inherent to life janitor's loge, whence also runs a letter elevator. Another telephone joins the office of Monsieur to the city telephone



 $\label{eq:APARTMENT HOUSE.}$ Rue de la Pompe and Avenue du Bois de Boulogne, Paris.

appears to be a desire to revert to the and telephone, a man can take life eassimilar to the Grand Gallery of Vernecessarily a somewhat dark passage.

much used for house building in Paris. Stone has been in all ages, and is, whatever may be done, the material par excellence for any building combining elegance with solidity. But it is costly, and is, therefore, only employed for revetments. The party rubble or brick. The roof supports and floor beams are of iron. Wood, which suffers both from fire and damp, has everywhere been banished from all edifices of a durable character.

The heights of the floors are as fol-

lows:

Ground floor,			4	metres.	
First floor, .			4	4.4	20C.
Second floor,			5	6.6	
,		٠	4	6.6	
Fourth floor,			3		75c.

The top floor, the fifth, under the roof, contains the servants' bedrooms. The underground premises consist of large cellars, distributed among the dif-

ferent tenants.

The rents, in the house we are speaking about, have not yet been decided upon. We know that they will vary between 18,000 and 30,000 francs. The only tax to be paid by the tenants is the door and window tax, at the rate of 2 per cent on the amount of the rent that is to say, for an apartment rented at 30,000 francs an additional sum of 600 francs.

In a residence thus arranged, which, to sum up, comprises: ante-chamber, hall, three drawing-rooms, billiardroom, dining-room, nine bedrooms, six dressing-rooms, two bath-rooms, four water-closets, two servants' rooms, kitchen, larder, brush-room, scullery, servants' rooms, hot-air stove, elevators, bells, hot and cold water, filtered water next day might be occupied by another

Louis XIV. style, which is stiffer and ily and be happy. All this comfort, presents straighter lines. The house the work of modern industry and we have in view is treated in the latter science, ameliorates his home life, while style, and we see an ingenious applica- the electric current, the telephone and tion of it in the main corridor, the sides even the theatrophone can in case of of which are ornamented with mirrors, need connect him with the outside world without compelling him to leave his sailles, in order to brighten what is home. But every citizen cannot afford to pay from 18,000 to 30,000 francs a Stone is plentiful in France and is year for rent, and therefore the house that we have taken as a typical residence for people with well-lined purses is in truth reserved for the richest of the moneyed class. But this example is nevertheless a good one, as it is also a type of much cheaper residences. Reduce the number of bedrooms to three walls and interior wall-masses are of or four, and the drawing-rooms and bath-rooms to one; make the entrance hall a simple ante-chamber; abolish the billiard-room; of all the offices leave only the kitchen: take away the gilded paneling, the marble, the mosaics, and the stained glass; and you will have an apartment at a tenth of the rent.

about 3,000 francs.

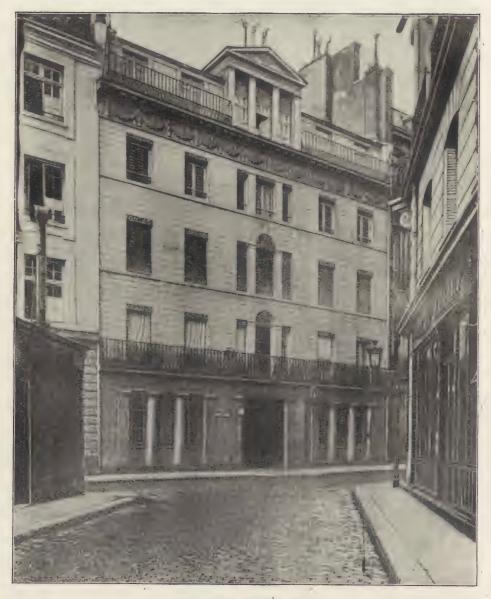
We must not omit to refer to a recent attempt made in one of our finest quarters, the Avenue Hoche. On the ground floor of a large house, occupying the space between the cellars and the first floor, a large hall has been fitted up which each tenant in the house has in turn at his disposal several times a month, and where evening parties, dinners, or balls can be given. Adjoining this hall, which is reached by a spiral stone staircase, there are a kitchen, servants'-room, waiting-room and cloak-room. This is a happy idea, but it is as yet too early to say whether it will prove successful. On the occasion of a ball or a wedding the tenant who is obliged to seek one of the firstrate hotels in order to find accommodation for a numerous assembly, will certainly be pleased to have under his own roof a room large enough to contain all his guests; but these events are unusual, and the hostess will always prefer to receive her friends in her own home rather than in a place which is equally at the disposal of her neighbors, a place where she would be in her letter elevator, gas, electric light and house but not at home, and which

tenant. This hall, however brilliant, it, and a hostess would derive no satwill still be characterless in its decora- isfaction from it. It would give her tion, whereas we know that if a lady is no pleasure to beautify it, for she would fond of entertaining, it is in order to receive no inward gratification thereexperience the pleasure of having her from, nor would her amour-propre be friends in her home, amid her own sur- flattered by success. People would say: roundings. The proverb says: "Dis- "Madame X has given us a splendid moi qui tu hantes, je te dirai qui tu es" fête," which might be said of anybody; tell you who you are). It might be X entertains—what taste she displays said: "Tell me how your house is in furnishing and in selecting her furnished and I will tell you who you household treasures." This would be

(Tell me where you frequent and I will but not: "How charmingly Madame are." A salon used collectively can praise indeed, as the compliment applies never have anything distinctive about to the hostess, not to the upholsterer.

Paul Frantz Marcou.





BENJAMIN FRANKLIN'S HOUSE.

Rue Penthievre, Paris.

Built about 1780 and now standing.



ARCHITECTURAL ABERRATIONS.*

No. 6 .- THE GOVERNMENT AND THE WORLD'S FAIR.



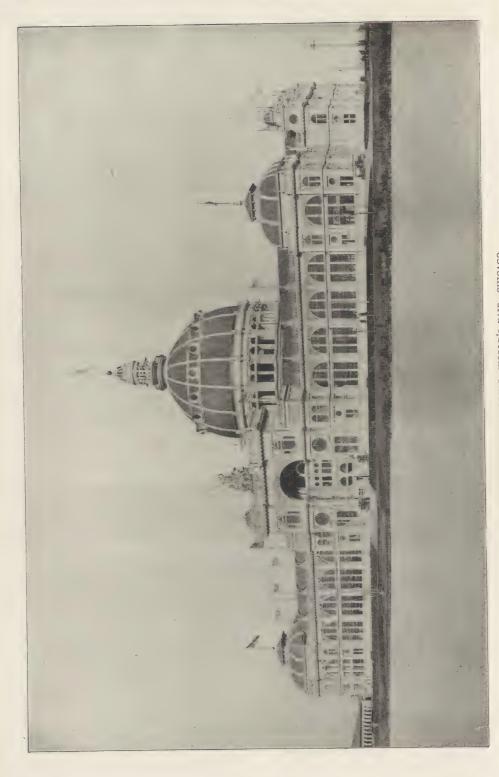
Government

the United States in erecting buildings view in the grounds of the World's Fair. ments for older countries. This is monuments of an earlier day were disbecause our exigencies have been new, placed by the reproductions of the primand in the presence of a new problem itive types, it was again the government an American architect is less tram- that led the way; and in the buildings of meled by precedent than the archithe departments at Washington and in tects of Europe. Unless he be an the extension of the capitol it furnished educated architect who knows what the not only the most expensive and ex-

HERE has never them to advantage, for his disregard been presented so will be mere ignorance. But if he be impressive an ob- an educated architect, his advantage is ject-lesson in the very great, and he has used it so well methods, or want that in "elevator architecture," which of method, em- is destined to an increasing importance ployed by the everywhere, European architects must of come here to learn.

While this advance has been going for its own use, as that which is now on on in the private building of the country, the government architecture has For, the Government building, which is been experiencing, not merely a stagnaan illustration of our official methods for tion, but an actual retrogression. Beprocuring architecture, is there seen in fore the war the government really furcomparison with the best that has been nished models for the building of the attained in our unofficial architecture. country, and for the architecture of It is since the war that the private States and municipalities. It undoubtbuilding of the country has made its edly represented the highest plane of greatest advance, and indeed in the lat- our professional attainment. The colter half of the period that has elapsed onial building was always decorous since the war. In two departments, and gentlemanlike, and was often enin commercial and in domestic archi-titled to a higher praise. The first captecture, the advance has been such itol of the United States was an admirthat we have ceased to be pu- able, and perhaps upon the whole the pils and imitators and have be- best example of colonial architecture. come to a very considerable extent When the Greek revival invaded the teachers and exemplars in these depart- country, and the Anglicized Roman precedents are, he cannot disregard tensive, but the most learned and taste-

^{*} We are making a collection of "Aberrations," and shall present one to our readers in each number of The Architectural Record.



THE GOVERNMENT BUILDING, WORLD'S FAIR, CHICAGO.

ful of the monuments of the newer tails of a single typical building and obstruction. But it was not very long can architecture. after such an office as that of the ure, in spite of one or two eddies in the official work is disgraceful, decessors. Supervising Architect, in addition to handling, the Government building is a an enormous amount of work in the rude and crude and ignorant compilaway of administration, it is evident that tion of features that are not good in the designs, if they proceed from his themselves, and upon the relations of personal inspiration, cannot be studied which no pains whatever appear to have and that the architectural result cannot been spent. The designer had every be successful. About thirty years ago extrinsic advantage. His building is there was a recognized government monumental in magnitude, measuring pattern of Federal building, and the 345 by 415 feet in area and 236 feet in post-offices of towns a thousand miles height to the top of the dome of which apart, erected at that time, are readily the diameter is 120 feet. These latter recognizable as emanations from the dimensions are not much short of those same mind. Unfortunately the pattern of the dome of the Administration was not a good one, but we might hope building, which really makes its effect, for better results than we have at-while the dome of the Government tained if a competent architect had de- building is absolutely ineffective. The voted himself to working out the de- cost of the Government building is

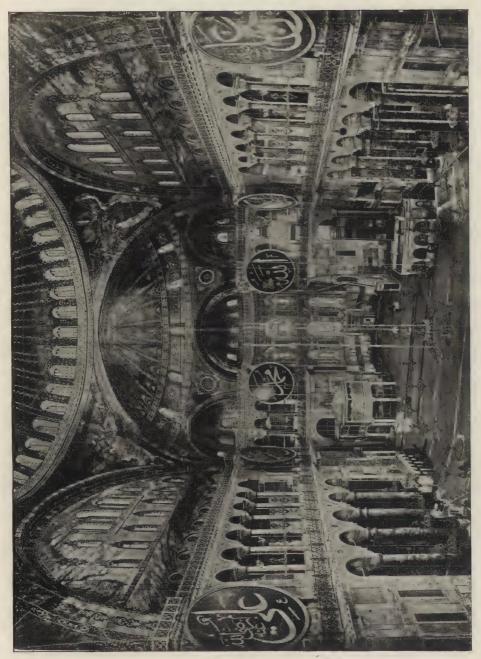
mode. Meanwhile, except at the very erecting this design with only such beginning, when public men knew modifications as were practically necesrather more about these things than sary in different cases. However that the average of private citizens, the may be, the government has been by government itself was by no means to far the most extensive builder in the be credited with the superiority of the country, and there is not a single build-public buildings over the average of ing erected for it since the war to which the private buildings of the country, any instructed American can point with A few instructed men had gained this pride, or that either reflects or contriadvantage for it without any aid from butes to the great advance that has the politicians, but also without any been made within that period in Ameri-

Certainly it is with a sentiment as "Supervising Architect of the Treas- far as possible from pride that such an ury" came to be established, although it American must contemplate the buildwas neither a very dignified nor a very ing which is supposed to typify the lucrative office, that the standard of pubdignity of the American government lic building began to fall below the high- at Chicago. Here for the first time the est standard of private building. The work of the foremost of our unofficial gap has continued to widen until now, architects is brought into direct comon the one hand by the advance in un-petition with the work of the official official architecture, on the other hand factory of architecture, and the private by the degradation of official architect- work is as creditable to the country as the latter process, when the Supervising the one hand is embodied the result of Architect happened, in spite of the an advance, and on the other of a rechances to the contrary, to be an actorogression. For no intelligent obcomplished and artistic practitioner. server can fail to see that the govern-But these exceptions had no effect in ment building is of an architecture so establishing traditions in the office, bad that it would not have been The tenure of the incumbent has been tolerated forty or fifty or sixty precarious and, on an average, singu- years ago. While in all the other larly short, even for a political office- great buildings with which in magholder, and the ambition of most of the nitude and costliness this one is to newcomers has been to do something be compared, there is evidence everydistinctively different from their pre- where, from the arrangement and When we consider the proportioning of the masses to the deenormous amount of work in the way sign and adjustment of the last detail. of design that is thrown upon the of a careful, intelligent and affectionate

in proportion to area than the cost of This front is distinctly not develsuch beautiful buildings as those devoted oped, and is as distinctly devilled up. to Fisheries, Agriculture and Fine The flat and shallow arcade of four Arts. It is indeed an ample sum, con- openings on each side is the only sugsidering that the construction is of lath gestion of a desire to make the most and plaster, and that what the architect of the length. It is rudely interrupted is required to do, after meeting the at the corners by pavilions that are practical demands of the building, is subdivided into three and at the centre to produce an impressive and spectacu- by a huge arch flanked by pavilions lar piece of stage-setting, in criticising that are again flanked by lesser pavilwhich it would be merely pedantic to ions. By these devices the length is insist upon the expressiveness and actuannihilated and the motive that might ality that we have a right to require of have been derived from it abandoned the architects of buildings intended to while nothing is put in its place. So far be permanent. Here, as in stage setting, as the designer had a motive, it seems illusion is what is aimed at. To give a to have been to accumulate in his look of antiquity and durability to what front the greatest possible number of is brand new and evanescent is here a features. Such a motive necessarily legitimate triumph. This is what the brings about an aspect of uneasiness architects of the Columbian Exposition and restlessness and is fatal to that have done with more or less success; all repose that is among the most essenof them with a creditable, some of them tial of architectural qualities, and that with brilliant success. And the dis- the buildings at the World's Fair that cordant note in the harmony is that do us honor possess in an eminent sounded by the Government of the degree. A building of so many feat-United States.

other buildings that the designer has themselves. But here none of the chosen some dimension of his building features is good, and that is where for architectural emphasis and archi- a photograph fails to do the buildtectural development, and that he has ing the justice it requires. The done this by skilfully subordinating the crudeness and lifelessness and graceother dimensions, while introducing lessness of the detail are even more such features as without veiling his marked than the infelicity of the massmain purpose, should enable him to ing and the defect of a general design. carry it out without producing monot- The architectural and the sculptural ony. In the Arts building, the Agri- detail alike are such that it seems cultural building, the Manufactures out of the question they could have building and Machinery Hall, it is interested the man who made them, length that has been chosen, length much less anybody else, and the punctuated rather than interrupted by enormity of the result cannot be apfortifying or relieving features. In the preciated, except by a view of the Administration building it is the actual structure in its surroundings. height, insomuch that the building it- There is a bill now pending before the self is with much art reduced to a mere Senate, having already passed the and effective pedestal to the soaring House, opening the design of public dome. But in the Government build- buildings to competition by private ing there is no trace of such a purpose practitioners. If there be any doubt or of any general purpose. The dome in the minds of the Senators as to the is too lofty to be the mere crown of a propriety of passing that measure, the spreading building, while it does not doubt would be dissipated by a pilitself command and concentrate the grimage to Chicago, and by the comattention. The actual length is great parison there found between the enough to make an imposing effect, condition of official and the condition if it were only developed. But it of unofficial architecture in these is one thing to develop a front United States.

\$400,000, which is considerably greater and quite another to "devil-it-up." ures would be distressingly busy, It is evident in illustrations of the even if the features were all good in



Vol. II.—3.—8.



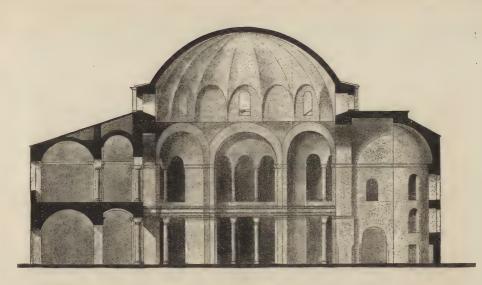
BYZANTINE CAPITAL. -S. VITALE.



BYZANTINE CAPITAL. -S. VITALE.



CARVING IN S. APOLLINARE NUOVO.



BYZANTINE ARCHITECTURE.

Part IV .- BYZANTINE DECORATION.



duced

well as they could be in a foreign town, which was prevalent at Rome. We are Hymettian marble in his house. too apt to think of Rome as a mudbuilt city with a few temples and public buildings of terra cotta or stone, and the Romans as the simple and severe people of the early days of the Republic, when the great Generals lived in small farm houses, wore a white toga, Just before the Punic wars (264-146 B.C.) there was but one service of public plate which was lent to each separately he always saw the same walls, their floors of gems and their

HEN Con- service of plate." The influx of wealth, stantine the and the acquaintance with the magnifi-Great made cence and luxury of Greece, and of Byzantium Oriental despots, very rapidly introthe capital duced the customs of Greece, Persia of the Em- and Egypt into Rome. Marble, which pire, Roman was at first looked on as a scandalous buildings luxury for a private person, soon bewere repro- came the favorite lining of walls, as though, so late as the first century B.C., M. Brutus called Crassus the "Palaand the decoration of them was that tine Venus" for having six columns of

Sulla is said to have been the introducer of mosaic pavement, between 88 and 78 B.C., though his son-in-law, Scaurus, had before that date used glass for one of the stories of his temporary theatre. Personal adornment kept pace with the magnificence of and tilled their land with their own houses, for Julius Cæsar had his shoes enriched with engraved gems! We know of the costly citron-wood tables of Cicero, and the gold and ivory ceil-Senator when he entertained foreign ings of Horace's time. In the days of Ambassadors. You may recollect the Augustus an edict had to be promulremark of the Carthaginian Ambas- gated to restrict Senators to the use of sadór "that the Romans were the most the white toga on festal days. Seneca good-natured people in the world, for thundered against the luxuriousness of though he had dined with each Senator the baths, with their costly marble

fittings of silver. Pliny, who died 79 decoration, seems to be inherent in A.D., wrote his diatribes against veneer- man, and only to be interrupted when ing walls with marble, and he tells us men or nations are wealthy, at periods that mosaic had deserted the floors for of the highest cultivation. the ceilings of rooms. Stained glass Bronze age, we read of the metal palmust, I think, have given additional ace of Alcinous: "Meanwhile Odyssplendor to buildings at an early period seus went to the famous palace of Alof the Empire. Even in Pliny's days cinous, and his heart was full of many costliness was more admired than art, so that in magnificence and splendor the Byzantines could not exceed, but could only rival the Romans. Rome has been stripped so bare that we might fancy it to have been a plain city, but for written descriptions. There was, however, an invention that chamber, and round them was a frieze must have rendered the splendor of of blue, and golden were the doors that gold and silver much less costly, and, closed in the good house. Silver were therefore, much more common at Con- the door-posts that were set on the stantinople, I mean the invention of brazen threshold, and silver the lintel gold and silver mosaic; the absolute thereupon, and the hook of the door date of its invention is, I believe, unknown. I may say that I did not find a single cube of it at Hadrian's Villa, Hephæstus wrought by his cunning, to nor in Caracalla's Baths, and these guard the palace of great-hearted Albaths were not built till the third cen- cinous, being free from death and age tury. It is probable that gold and sil- all their days. . . . ver mosaic preceded those medallions, in which an etching on gold leaf is preserved between two sheets of glass; these medallions, having portraits or symbols etched on them, bear evidence of their being of Christian times, so antiquarians believe them to be no earlier than the end of the third, or the beginning of the fourth, century. Specimens of the glass medallions may be seen in our national collections. Gold and silver mosaic is believed to have been used in Constantine's days, but I know not on what ground; the finding them in buildings of his day is no proof, unless it be confirmed by documentary evidence, and there is little or no evidence of the buildings in There is a mosaic portrait of Flavius while all the tiles were of silver.' Julius Julianus in the Chigi Library that has several cubes of gold mosaic den House had some parts overlaid in the dress. It was found in the cata- with gold, and adorned with jewels combs of St. Cyriaca in the Tiburtina, and mother-o'-pearl. "The supperin 1656, and is believed to be of the rooms were vaulted, and compartments second half of the fourth century; but of the ceilings, inlaid with ivory, were there is nothing to prove that the gold made to revolve and scatter flowand particularly the precious ones, for that his grandfather, Basil the Mace-

thoughts as he stood there or ever he had reached the threshold of bronze. For there was a gleam as it were of sun or moon through the high-roofed hall of the great-hearted Alcinous. Brazen were the walls which ran this way and that from the threshold to the inmost was of gold. And on either side stood golden hounds and silver, which Yea, and there were youths fashioned in gold, standing on firm set bases, with flaming torches in their hands, giving light through the night to the feasters in the palace" (the Odyssey of Homer, Lib. 7, lines 80 to 102, by Butcher and Lang. 8vo. London. 1887.)

It is not very clear whether the whole of the inside of Solomon's Temple was covered with gold, or only the oracle (I Kings, cap. 6, v. 20, 21, 22); but Polybius tells us that the palace at Ecbatana was covered with gold and silver (Lib. 10, cap. 27). "For all its woodwork being cedar or cypress not a single plank was left uncovered; beams and fretwork in the ceilings, and columns in the arcades and peristyle, were which they are found being of his time. overlaid with plates of silver or gold,

Suetonius tells us that Nero's Golmosaic cubes were not of a subsequent ers" (Suet. "Nero," cap. 31). Con-The passion for using metals, stantine Porphyrogenitus tells us

with nielli. The walls to the right and on which there are animals. the plinth that carries them. The Eastern Churches. works raised by his hands in the Imperial residence."

built of gold and silver bricks, and utterly impossible for any mere human covered with jewels, described in the workman to express her loveliness, or Arabian Nights, were suggested by to imitate it in a statue." I presume some of the splendid rooms or oratories the sculptors eventually turned ivory of the Byzantine emperors. The means carvers, for in this material figures do of decoration being metal, marble, not appear to have been objected to sculpture, mosaic, and painting, I will The capitals of the columns, when not now take the carving and marble. pillaged from ancient buildings, gener-There was in the Early Christian ally affected the cubic form, like those Church a marked aversion to the use of Constantine's cistern, called the of figure sculpture in whole relief, and Thousand and One Columns, or that to statuary in churches, on account of of the plan of a Corinthian cap, with a the pagan idols being mostly in that convex instead of a concave outline; form, but bas-relief did not seem to the whole capital was generally covered have been so much objected to. At with fine pierced floral ornament.

donian (867-886), built an oratory to first, too, there was an inclination to the Saviour close to his apartment represent the Founder of the Faith by (Cenourgion) in the Sacred Palace, means of symbols, such as the lamb or and says: — "The magnificence and the fish; but remains of angels carved in splendor of this oratory are incred-relief are found at Qalb-Louzeh, and ible to those who have not seen it, so there are figures in the caps of the great is the quantity of gold, of silver, columns of the narthex at "The Monof precious stones and pearls which are astery - in - the - Country." Generally found amassed in its inclosure. The speaking, capitals of columns are pavement is wholly of massive silver, carved with floral ornament only, worked with the hammer and enriched except in the case of old Pagan caps, left are also covered with thick plates Mussulmans seem also to have had an of silver damascened with gold, and aversion to figures in sacred buildings, heightened by the brilliancy of precious as conducive to idolatry, so what with stones and pearls. As to the screen the original objection to figures by the which closes the sanctuary in this house Christians, the fury of the Iconoclasts of God, what riches does it not combine! and the puritanism of the Mussulmans, The columns are of silver, as well as little figure sculpture is found in the This must have architrave which rests on their capitals been a severe trial to the sculptors who is of pure gold, loaded in every part had turned Christian, and who were with those riches which the whole of surrounded by the masterpieces of India can offer. One sees there, in ancient sculpture and statuary, though many places, the image of our Lord, Constantine had all the fountains he the God-man, executed in enamel. built carved with these two subjects, Language refuses its office to describe viz., "Daniel in the lion's den," and the splendid decorations of the sanctu- "The Good Shepherd." Sculpture for ary, and the sacred vases which it con- secular purposes was still used in Justains, as a place especially appropriated tinian's time, for Procopius tells us that to the keeping of the treasures, and the sculptors and statuaries of Jusdesires to leave them as things which tinian's days produced such excellent nothing can approach; for, since statues that they might be taken for speech can only remain below the sub- the work of "Phidias, the Athenian, of ject, it is better to be silent. Behold, Lysippus of Sicyon, or of Praxiteles." then, if I may say so, these Oriental He tells us of the bronze equestrian beauties, which have gushed out from statue of Justinian in the Augusteum, the bosom of the living faith of the and one of the Empress Theodora, in illustrious Emperor Basil on to the the court of the baths of Arcadius; he says:-"The face of the statue of Theodora is beautiful, but falls short I have no doubt that the palaces of the beauty of the Empress, since it is

sculpture like filigree work.

tals are exhibited. The plan of decora- compartments of the nave stands on a tion was, as I have said, practically the short pedestal about two feet high, same as the later decoration of Rome; the columns were of choice marble monoliths, with carved capitals; the walls were lined with thin slabs of various colored marbles, mostly arranged in panels with borders. Sometimes the borders, and sometimes the tals. Above each capital is a block, panels, were carved with flat carving; and sometimes the borders, and sometimes the panels, were of inlaid marbles, now called "pietra dura." There were carved cornices, strings, door, and window heads, while the vaults, arches and marble linings have been stripped from only here and there that we find a bit of marble in an angle, held on by a clamp, or by the floor mosaic. Monostill find; we also find floor mosaics, on account of their being covered by the rubbish when buildings were pulled a cornice is represented in pietra dura. down, or fell down after they were Beginning at the top there is a green abandoned; of glass mosaic we find strip between two white ones; below nothing but the cubes amongst the that is a strip of red marble for the rubbish, excepting a few coarse rustic works like the faces of fountains at tilevers are represented in perspective, Pompeii. But Rome had been stripped capped with a bead and reel, and a when the capital was changed to Con-dentil band; the soffits of the cantistantinople, and again when paganism levers are red, with a white side and had been abolished; it had been per- end, the latter has a black panel in it; petually overrun by hordes of savages, between the dentils, and for the soffit and it has also suffered at the hands of of the corona, red marble is used, and the builders, after the revival of learn- black for the cantilever band, with a ing. I mention this because we have white star in the centre of each space; now no means of comparing the in the middle of each pier the cantilever arrangement of the marbles on the is turned the reverse way, and the walls of Byzantine churches with those square piece between the sides is filled of Roman buildings. The church of in with black, with a white star, and clerestory windows above, and is cantilever band is a white band, and covered with a timber roof. The nave below that is a red one, which completes Some of the columns have old caps, too guished air.

There was a great inclination, even in small for the shafts, and some caps are late Roman days, to make all floral Byzantine; there are also two verde antique columns to the narthex. Each A few well-known examples of capi- verde antique column in the centre showing that the shafts had come from older buildings; they have classic bases, but the shafts themselves have the wide fillet under the apophyge, which is characteristic of Byzantine shafts. None of the other columns have pedesapparently the survival of the entablature; some of these blocks are carved, and some have only a cross. lower arcade has Corinthian or composite caps, and the upper arcade Ionic ones; between the columns of the nave domes were covered with mosaic. The was once a solid moulded balustrade, many pieces of which are now used as the walls of Roman buildings, and it is paving, and there is also one side of an ambo, now used for the same purpose; a similar balustrade to the upper arcade still remains. The whole surface of lithic shafts, and their carved caps we the walls is covered with slabs of marble.

Under the bases of the upper arcade, corona; below this, plain square can-St. Demetrius, at Thessalonica, is a the spandrel piece at top is also black two-storied arcaded basilica, with with a white honeysuckle. Below the between the bema and the narthex is the cornice. In the spandrels of each divided into three compartments by of the arcades, below the cornice, there piers, and between the piers there are, is a square panel, whose bottom touches in the middle bays, four columns of the extrados of the arches, inlaid with verde antique, and three columns of colored marble in geometric patterns. other marbles in the two other bays. The whole church inside has a distin-

divides the spaces into a long lower, have ever seen. of white marble, with the Venetian as well. dog-tooth going all round them: some some have horizontal zig-zags. slabs, and so put together that the four side the Imperial eagle remains. ished, and the effect was glaring and before and after. ghastly.

mosque, and the church of the monas- which are much more effective than

At Sta. Sophia, Constantinople, there tery in the country, have their walls is a broad band of verde antique above treated in the same manner, only at the the skirting; above this are four bands Kalendar mosque much of the marble of light marble dividing the height into is replaced by coarsely-painted imitashort spaces at the top and bottom, tions; at both these churches there is and a longer one in the middle. Above some lovely Byzantine acanthus, carved the cornice is a band of verde antique, in white marble, and pierced right and then one band of lighter marble through-some of the loveliest work I The difference beand a shorter upper division, above tween these two churches is this: one which comes the pietra dura work. In now looks magnificent and the other the lower part, the centre panels have looks as if it had once been so. There stiles and rails; these are first marked is a veined marble screen in the southout by projecting slips of white mar- ern gallery of St. Sophia, supposed to ble, with the Venetian dog tooth on have formed the Imperial pew for the the face, and the stiles and rails are Empress Theodora, her maids of honor, carved, the panels being of porphyry, and perhaps her court, but, as far as I verde antique, or some other precious understand, it was on certain occasions or effective marble. The same thing used by the Emperor, who afterwards occurs in the lower panels of the first descended by the wooden staircase, floor, only the stiles and rails are not and I do not know if Theodora sat carved; in the upper and lower panels with him. We know that the corona-of the ground-floor, and in the upper tion took place in the ambo, and that panels of the first, the panels are only the Emperor had a seat in the solea, separated from the ground by one line the vast E. hemicycle, and in the bema

The screen now consists of two imiare filled with strongly-veined marbles, tation doors, in two leaves of veined placed so as to form vertical squares marble, with a wooden door between in the middle, with zig-zag sides, and them. Each pair of marble doors has The an architrave round it; the two leaves variety of precious marbles used is are shut against a narrow pilaster, quite extraordinary; they are all meneriched with ornament, with a capital tioned in the poem of Paul the Silentiary. and base. Each leaf has five panels As I said before, the sea air and the dust in height. Two panels out of the five have given a uniform dusky color to have large plain bolection mouldings, most of the marble, like that I spoke of and no ornament except a bead and from Salonica, though the white, the reel, and the three others have the purple porphyry, and the verde antique bolection mouldings enriched with the still show their color distinctly. There raie du cœur. The stiles and rails are is an effect of subdued magnificence moulded, and stopped at the centre of about the marble work, but I have no each panel both ways, and in the blank doubt the effect would be better if the space between the stopped ends are marble work was repolished, provided bosses, except opposite the middle of that there is no streaked rosso-antico; the third panel in the shutting stile, this has wide streaks of the color of a where the rings for opening the doors raw steak, with livid white between; are carved. The screen is capped by as a rule each block is cut into four a square ornamented band. On one diagonal streaks make a symmetrical late W. Burges used to be emphatic on panel. Some years ago I saw parts of the importance of this screen, as show-San Vitale that had lately been repaired ing what wooden doors were like in with streaked rosso-antico newly pol- Justinian's time and for some time Also interesting are the two leaves of a door, now At Constantinople, the Kalendar used as jamb linings, at Μονή τῆς χῶρας

the doors before described, but of battle of Arbela, when Alexander the panels were once sculptured with Darius. a portrait of the Virgin, attributed to copy of a picture. St. Luke, and these doors might have inclosed it. The holy robe of the Virgin was alternately kept here and at the church called Hodegetria, and these doors may have closed in the cupboard where it was kept.

"pietra dura," as it is so well known; it is merely inlaying one marble with another, so that beyond the excellence of workmanship, there is nothing but speak of. That at Sta. Sophia is admirable, and consists mainly of black and white, enlivened by pieces of green and red porphyry here and there. "Pietra dura" might now be used with great effect in sumptuous modern buildings, especially when near the

eye. Mosaic is believed to have taken its origin from floors or paths being paved with little pebbles of different colors, and this sort of mosaic might be very effectively used now. Hamdy Bey, the director of the Imperial Museum, and the discoverer of the magnificent yond Pera, on the Bosphorus; the garden paths are ornamented with a floral pattern in black pebbles on a ground of pale yellowish-brown ones, and it certainly looked very quaint and pretty.

Mosaic certainly bore the name expressive of its origin up to the eighth century, for in the treaty made between Walid and the Roman Emperor it was called $\psi\eta\varphi$ 0615, and may bear that name still in Greek, Arabic, and Turkish. According to Pliny, it was introduced from Greece by Sulla, who used it for the pavement of the Temple of Fortune cal beauty was rather looked upon as the ground for the arched roofs of emaciated by fasting, privation, sufferment mosaic of antiquity is that of the ness, vigils, and despair.

similar treatment, except that the Great finally overthrew the power of This mosaic was found at figures, which have been chipped Pompeii, and it could not, therefore, There are the remains of the have been later than the first century. carved rings which were evidently in Pompeii having been destroyed in 79 lions' mouths. In this church was once A. D., this mosaic is supposed to be a

Most exquisite specimens of floor mosaic, as far as workmanship goes, have been found in Hadrian's villa at Tivoli, composed of fine stones in minute cubes. I have said nothing of the pavements of Byzantine buildings, It is hardly necessary to speak of for the very obvious reason that every mosque is covered with carpets or matting, so you cannot see the paving; but I believe it is generally the superb Opus Alexandrinum work, principally the design and the harmony of color to composed of purple and green porphyry let into white marble; but beautiful as marble mosaic is, it does not equal the force and splendor of that composed of glass cubes, and when this has a deep ocean blue ground it is the most magnificent of all decoration, except stained glass.

> I told you before that the exact date of gold and silver mosaic is not known. Supposing St. George at Salonica was built by Constantine, and the mosaics are co-eval with the church, there is perhaps no mosaic left that is so

splendid.

The Bema is said by Texièr and sarcophagi at Sidon, has a house be- Pullan to be at the East end, another argument for the church not being of Constantine's time.

In classic days, with the exception of portraits of the emperors, or of private persons, the only titles to representation were being gods, physical beauty, and intellectual eminence. Gods, goddesses, nymphs, and demigods, were portrayed as the most perfect specimens of human beauty; for intellectual attainments there were lawgivers, philosophers, poets, conquerors, and statesmen.

Christianity changed all this; physihe built at Præneste. Pliny says: the "sign of the beast." The forms "Since his time these mosaics have left most affected were those of saints houses, and they are now made of ing, and neglect, with their intellectual The most celebrated pave- faculties almost extinguished by loneli-

in revolt against the portrayal of disease and deformity; so if we get an emaciated saint, we generally get composition.

The zone of the dome on which the an Empress, and twice a slave. compartments by mosaic ribs, and each transepts are covered with deep blue compartment is filled with two or three mosaic, and on this are magnificent saints in front of an architectural back- ornaments and figures in gold. Some churches, are all of gold; the archi- color of a peacock's neck. building is a golden house indeed.

The curtains with which all the hands in prayer.

has a white dalmatic; the floor on of Justinian. which they stand is gold. In another ciborium in the middle between them; gold on a ground of green turquoise; the floor is gold. In another Kosmos in the scrolls are all sorts of animals;

Byzantine pictorial art was, as it left of a circular ciborium, with three were, the mingling of these two streams carpeted steps, light green curtains, of the Classical and Christian ideals. two-thirds of the height of the columns, The Byzantines were too much imbued inclose it, and the hollows between the with the Classical spirit, and were too loops of the curtain and the golden rod much encompassed with the master- are scarlet. These saints stand on a pieces of Classic art, to be wholly gray floor, the greater part of which is devoted to the Christian view, not to in shadow. The vaults of the chapels speak of their instincts as artists, being are also covered with mosaic in patterns, some having silver mosaic and some have birds in the panels.

Perhaps the finest mosaics are to be some plump angels to complete the seen at Ravenna, in the tomb of Galla Placidia, the daughter of Theodosius To return to St. George at Salonica. the Great, who was once a Queen, once mosaics still remain is divided into tomb is cross-shaped, and the arms or ground; the ground and the palaces or of the blue mosaic in this tomb is the tecture is made out by being edged Placidia died in 450, and I suppose her with color, and having colored friezes, corpse was embalmed, for it is related bands, and ornament upon it. Each that her body was placed in the tomb seated on a chair of cypress-wood.

In St. Apollinare in Classe, of the openings are furnished are looped up, sixth century, there is a most charming and are mostly of light tones and lively mosaic in the apse, with lambs in a colors, bright peacocks and gray pea- meadow. The most stately and monthens, storks and cranes, perch on the mental mosaics are those in St. Apolroofs; in some cases pendent lamps are linare Nuovo; on each side of the nave shown in each of the arcades. The are friezes, the one on the north side saints or martyrs are in colored tunics shows a procession of twenty-two virand togas, with bare heads and hands, gins, with the mitre on their heads, though in the case of old saints it is carrying crowns in their hands to the difficult to say whether it is their white Virgin and child at the east end; behair or a white skull cap that is shown. hind them is a grove of palm-trees; on They are supposed to be lifting up their the south side at the west end is the town of Ravenna, with Theodoric's One compartment contains three palace, and then follows a procession figures, viz., Therinos in the centre, of twenty-five saints holding crowns Philip on his right, and Basil on his and receiving the benediction of the left; they have dark gray tunics, and Saviour, who is sitting on a throne; in pale blue togas, shot with pink, Philip this church is found a mosaic portrait

San Vitale has the most lovely mosaic compartment Romanos and Eucar- ceiling over the sanctuary I have ever pionos stand right and left, on each seen. The ceiling is groined and the side of an apse, the pavement is of gray four compartments have the ground slabs, with a darker stone in the middle counterchanged. The east and west of each. In another compartment, compartments have dark green foliage Onisiphoros and Porphoirios stand on on a gold ground, and north and south the right and left of an apse, with a have olive-colored foliage edged with and Damianos stand to the right and in the centre of each compartment four

winged angels stand on azure balls and beautiful marbles, reaching up to the support a circle of leaves, containing mosaics of the ceiling. Of these marthe Lamb, on a deep blue ground bles, some are of a Spartan stone equal studded with gold and silver stars, to emerald, while some resemble a There are also other fine subjects in flame of fire: the greater part of them the Sanctuary, notably Justinian and are white, yet not a plain white, but Theodora opening the church. Some ornamented with wavy lines of dark of Theodora's ladies-in-waiting are blue. clothed in tissue of gold enriched with Justinian, Lib. I., cap. 10.) jewels. The Empress is crowned, and in the Imperial purple. On the bottom stantine Porphyrogenitus' description of her robe the adoration of the Magi of the mosaics in the Cenourgion, built is embroidered in gold. She has strings by his grandfather, Basil the Maceof pearls from her head-dress hanging down to her shoulders. The nimbus in those days is said to have been an mosaics in the narthex and the upper emblem of power, rather than of sanctity, for she has it.

I am indebted to Mr. Oppenheimer

San Vitale.

description of the mosaic in the vestibule of the Imperial Palace of the line of them can be seen. Christ, the Chalce: - "The entire ceiling is deco- humble shepherd, with a crook, and a rated with paintings, not formed of lamb in his arms, became later an Orienmelted wax poured upon it, but com- tal potentate clothed in magnificent apposed of tiny stones adorned with all parel, and sitting crowned on a golden manner of colors, imitating human throne. In spite of Byzantine art figures and everything else in nature. getting ossified by ecclesiastical inter-I will now describe the subjects of these ference, the Byzantine artists did keep paintings. Upon either side are wars for a long while the Classical traditions, and battles, and the capture of number- and certainly learnt the art of monuless cities, some in Italy, and some in mental decoration. The simple and Libya. Here the Emperor Justinian more primitive rules were always kept conquers by his general Belisarius; in view, dignified repose in the figures, and here the general returns to the and almost absolute repetition. I saw Emperor, bringing with him his entire very little of late mosaic in Greece, it army unscathed, and offers to him the was not only nearly dusk at Daphne, spoils of victory, kings, and kingdoms, but the church was boarded up for and all that is most valued among men. repairs, but we have most beauti-In the midst stand the Emperor and the ful and careful drawings of its mosaics Empress Theodora, both of them seem- by Messrs. Schultz & Barnsley, and of ing to rejoice and hold high festival in other mosaics in Greece, etc. Some of honor of their victory over the kings of the subjects in the narthex of $Mov\eta$ $\tau\tilde{\eta}^5$ the Vandals and the Goths, who ap- χωρας, all in mosaic, are quite Classic proach them as prisoners of war led in in the folds of the drapery, and some is triumph. Senate of Rome, all in festal array, of blue-vert tapestry on a gold ground; joy which appears on their counten- executed in the reign of Andronicus II. ances; they swell with pride, and smile (1282-1328). upon the Emperor, offering him honors as though to a demi-god, after his mag- nople was at one time a perfect museum nificent achievements. The whole of the masterpieces of ancient art; the interior, not only the upright parts, but Hippodrome and the Augusteum were also the floor itself, is incrusted with full of them, and there can be little

(Procopius, the buildings of

In the last chapter I gave you Con-

donian.

There are some lovely ornamental galleries of Sta. Sophia. Those in which the harmonies are got mainly by deep blue, silver and green, with a for a study of another fine mosaic in little gold and red, are, to my eyes, the finest. The figures have been mostly Procopius (Lib. I., cap. 10) gives a obliterated by painting or gilding over them, though in some cases a faint out-Around them stands the beautiful in color, almost like a piece which is shown in the mosaic by the these mosaics are said to have been

You must recollect that Constanti-

doubt that these masterpieces were tiful landscapes, scenes, and persons of not a painter.

store for them, in the two great popular arts of glass painting and mosaic. I say popular, because large examples of these arts are more seen by the people at large, and more appreciated by them than what is looked upon as

superior work.

heavenly form of beauty.

studied by the mosaic workers and the day, and for showing me beauties I illuminators. The great difficulty is to have not seen, which been have created tell the age of illuminated MSS., for by their imagination, and to the past the illuminators were very fond of painters for preserving the beauties of copying subjects from the old MSS. former times; and there is no doubt and from old mosaics. There are often that for certain delicacies of color, and to be found traces of old classical com- for certain qualities of texture, oil positions, both in mosaic, and in illumi- painting is supreme, but it is rarely so nation. At the Baptistery at Ravenna, decorative in buildings as stained glass there is John the Baptist on the bank, or mosaic. Pictures are transcripts and Christ in the Jordan. This is not from nature, either directly from only shown as water, but is personified things seen by the eye of the painter as well by a river-god with an urn and or evoked by his imagination; they are I O R D written over him. The MS. entities of themselves, and transport of Joshua in the Vatican, said to be of the beholder to the places they reprethe seventh century, has many illumi- sent and to the period of the actions nations that are quite classic in treat- they portray. They present other ment. Isaiah between night and scenes or other periods than those morning, from a psalter, looks like a immediately surrounding the beholder; classic picture; it is now in the they appeal forcibly to his imagination, National Library at Paris, and is said and transport him elsewhere. I ask to be of the ninth or tenth century. myself is this the true decoration of a There are the remains of a few painted wall or ceiling? This wall or this ceilfigures in the North Church of the ing is not only a necessity but a patent Monastery in the Country; one could fact, and it seems only to ask to be not judge of the general effect as made beautiful to look on and to require decoration, as the bulk of the walls a certain amount of conventionalism in were whitewashed, and, besides, I am its treatment. From a painter's point of view, the exchange of this prosaic I beg to remind any painters read-reality for some poetic vision may be ing this that there is a great future in looked on as an inestimable gift; the magic of his brush has annihilated the reality. Instead of a wall I see-

> "The maid-mother by a crucifix, In tracts of pasture sunny-warm, Beneath branch-work of costly sardonyx."

I know that glass is not only a trans- But as an architect, I do not want my parent medium, but when used for wall or my ceiling transmuted; I only windows is meant to let in light, so that want it to be as beautiful as possible, in this respect it is false to nature, and really the doing this affords the but it admits of form, composi- means of showing purity of outline, tion, and color, and as regards masterly composition, and certain this latter, the transcendent loveliness broad qualities and harmonies of color. of good stained glass in sunshine, It by no means excludes figures, it only is not only sufficient to excuse all excludes pictures, and I contend that other faults, but is to me the most the rigid lines of architecture tend to give style to the pictoral composition Titian said of mosaic:—"It is the that is put upon them. White marble true painting for eternity," but from an statues and bas reliefs are from their architect's point of view it is wanted as color equally fatal to all full-colored the decoration for a building, and not decoration. I hope to see the backs of as a bad copy of a picture in oil. I am all our porticoes filled with mosaic, and deeply thankful to all living painters all pediments and niches full of sculpfor preserving for my delight the beau-ture. I must also say to those painters

in mosaic, that they must do much of by the smoothness of the surface, and it with their own hands, for I believe the ease with which it could be cleaned, fected by cartoons made in a studio the color. with the work carried out by mechanics. It is essential to know the material, and to see London, and all the great manuto learn the art of producing the refacturing towns, changed from dismal, quired effect in the spot intended, and sooty cities to those in which every this spot is often high up and peculiarly building is full of color and artistic comanother means by which our dismal, cate or deeply-colored harmonies, or smoky streets may be made lovely and resplendent with gilt bronze, polished resplendent with color. The health of granite, porphyry, and glass mosaic.

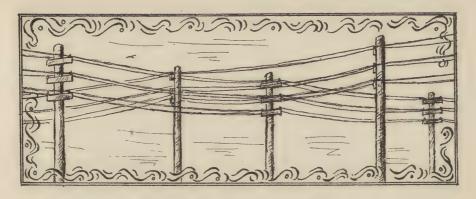
who wish to work in stained glass or the inhabitants would not only benefit that we shall never get either art per- but by the beauty of the design and of

What a fascinating vision it would be Enameled brick or pottery is position, made lovely by light and deli-

Professor Aitchison.

(TO BE CONCLUDED.)





CROSS-CURRENTS.

ON THE RELIGIOUS ASPECT OF ARCHITECTURE.—Being the substance of a Lecture delivered before St. John's Theological School, Cambridge, Mass.

HAVE been very courteously invited to in this connection, for here, you will acknowledge, sion of the few, the conscious striving of individquestion of art, as a whole, I should be able to sciences tell them is the mark and measure of true deal with the subject in an abstract way alone, since I claim to be neither painter, sculptor nor musician, nor yet a professor of æsthetics, but culture and the advancement of art paraded in all only a practical architect.

Yet there is no reason why a consideration of architecture alone should circumscribe our vision propaganda are practically nothing; such imor qualify the exactness of our conclusions. The provement as there has been of late, and it is very nature of art may be seen in any one of its manifes- marked, has been due to social and spiritual tations, and I think that in architecture more than causes which have had little to do with art schools in any other art may perhaps be read the nature and art hand-books. and laws of art itself; and in the history of architecture particularly may be seen most clearly the ganda; a few men cannot say: "Go to! we will very fact upon which I wish to lay great stress, create an era of art." Art develops only from and that is the intimate and vital connection that certain conditions of life, and those conditions do exists between art and religion.

Now, possibly, you will say, "How can he speak of the religious aspect of modern architecture, when we have nothing that can really be called a logical school of architecture at all, unless growth of the tree. he finds in the chaos of sectarianism, with its two to be if anything most unreligious?"

Well, I must acknowlege that such a question speak to you on the religious aspect of mod- would bear the show of justice, for it is a sorern art. I think you will justify me if I rowful fact that at present we can boast of no art narrow this vast field a little and content myself which has the elements of vitality and of univerwith considering only the subject of architecture sality. Such poor art as we have is the possess-I may speak with some show of reason, while in any uals for the restoration of that which their concivilization.

> Therefore it is that we find the cause of art the gorgeous panoply of a reigning fashion. But the results that follow from this self-conscious

> For art is not the result of a conscious propanot at present exist. Art is a flower; it will only appear on the tree of life under certain circumstances. Without the bloom, life is barren and valueless, for the flower is the proof of the healthy

We live in a period of decadence, yet so pecuhundred and forty lamentable divisions, some liarly mean is the character of this decadence that shadow of kinship with the riotous eclecticism we are denied even the luxurious, decaying art of modern architectural style. How can he speak which with a certain degree of unworthy splendor of that as religious which seems to the observer blinded men's eyes to the imminent fall of Athens, Rome, Byzantium, Venice, Florence, sixteenthcentury England and eighteenth century France. practical destruction of religion and of the re-Venice glared in its last days with the golden glory of Tintoretto and Veronese; and it was the same with the other dying civilizations. But as for us, so sordid is the nature of our decadence that we are left with nothing wherewith to cover our naked-

It is useless to blink the fact, for it still remains: We have no genuine art, as a people, and we can never have, so long as that which calls itself "modern civilization" possesses so little kinship with the true civilization which has created art in the past. We never consider the essential impulse of art, and it is pitiful to see the poor little attempts we make towards this end, still dimly felt to be desirable. We build big museums of art and crowd them with pictures filched from their homes, and casts which, for purposes of art education, are useless. Then the people go and stand before the mute memorials of dead civilization, wistfully and hopelessly. It would be towards the spread and preservation of Christianlaughable were it not miserable. One is reminded of a child who gathers roses and lilies and thrusts acy, as the careful writings of theologians, or the their stalks into the sand, hopeful of a fair garden.

Then, too, we establish Schools of Art, where we teach the children of the nineteenth century to draw charcoal pictures of chalky casts, and make oil studies of copper pots and of turnips. Then we wonder dimly why they don't go on and paint pictures that outdo the Bacchus and Ariadne of Tintoretto, or the Sacred and Profane Love of Titian, or carve statues which make one forget the Victory of Samothake or the King Arthur of Innsbruck. Of course they can't; they can only make still larger plaster casts, and pictures of more turnips and of bigger copper kettles.

For with that superficiality that characterizes our attitude towards serious things, we look on art as something which may be purchased or acquired, failing utterly to understand that it depends wholly upon a certain condition of life for its development, a condition separated from that of the present by the entire diameter of being. Rationalism, materialism and individualism are absolutely and finally fatal to art, as well as to many other things, and these characteristics are, you will grant, dominant and supreme in the present century, to the destruction, not only of art, but of religion, and of true living as well; and because of this, because our false system of life and thought has resulted in the utter degradation of labor and of living, we can no longer have that art which was the expression of man's delight in his own handiwork, while because, as is an inspiration, an impulse to worship, will well, the existing system has succeeded in the work silently but surely for the strengthening of

ligious impulse, we cannot have that art which was the result of man's sense of awe and reverence and worship.

For I hold it to be an immutable truth that art and religion are inseparably united, in that art is the manifestation of man's worship of beauty and idealism, the symbolical expression of those dreams and emotions which pass experience and transcend all ordinary modes of expression. Thus it is that art not only owes to the religious impulse its noblest incentive, but becomes the only means whereby religion can fully express itself. Through music, poetry, painting, sculpture and architecture, Christianity can appeal directly to the human soul, with a force and directness that are irresistible. I fully believe that the Cathedrals and Churches of Europe, solemn and majestic, full of dim light and strange stillness, with their splendid and mysterious ritual, have done quite as much ity and the raising of the Catholic Faith to supremexhortations of preachers. And I also believe that Puritanism owes its failure quite as much to its enmity to art and beauty as to the peculiar nature of the mistaken theology which condemned these things.

It is for this reason that I believe all questions of art are of vital interest to every one who accepts, or works for the spread of the Catholic Faith. Art is the ready servant and ally of the Church and never have her proffered services in the shape of ritual and adornment been accepted without vast benefits, as, on the other hand, never have they been rejected without corresponding loss. Iconoclasm and Puritanism are very unsavory episodes in Church history, and the disasterous results they achieved have amply proved the futility of their excuses.

I said that I would confine myself to the question of architecture alone and I must keep my word. It is, I think, a branch of art which must appeal very strongly to you, for in these days of the youth of the Church in America it will fall to the lot of nearly every Priest to be connected at some time with the work of Church building, and there can be no more serious question than that of the proper building of the structure which is the earthly. Tabernacle of God and the temple wherein are solemnized the sacramental mysteries of the Catholic Faith. Not only this, but on the designing of the Church may depend the success or failure of the given work, for a church which

will be not only an insult to God, but a hindrance lower and lower, until it has become in this to the spread of the Faith. Too often, unfor- century what we see it to be in France and tunately, the question has been one merely of Germany, atheistic, lawless and debased. fashion or of expediency, or of the predilections of the Roman Church.

but that the same condition should hold in eccle- careless of religion and of spiritual things. siastical architecture is a strange and awful hap- Let me ask you to consider with me for a moreproach.

What is the reason of this? How is it that conviction. where once we found the Church not only cultiit was also stamped out in the other nations that century. accepted the reformed faith, and that from those

Christianity, while a tawdry or barren building other protection; failing to find this it has sunk

During the fifteenth century, churches were of some careless or ignorant or infidel architect, built in half the towns of England; it was a and as a result the American Church is able to period of gigantic religious enthusiasm. When boast a collection of churches which for bizarre the Scourge of England died he left a land that and grotesque hideousness equals that of the de- looked in vain for evidence of religious life, as nominations, while it is exceeded only (in my such life might be shown in architectural effort. opinion) by the actually blasphemous architecture Not for three hundred years were the offices of architects required by the prostrate Church, and For the past fifty years, keeping pace exactly when at last in the middle of the present century with social and mental conditions, architecture in there came a new impulse into the life of the America has been in a state of incorrigible chaos. Church, the estrangement between her and the Style has been but a riot of strange and outland- architects was complete, and the misunderstandish fashions, sought out of the dead past and gal- ing also. Therefore the Church came to look on vanized into a fictitious life. This has been true architects simply as on builders in good clothes of ecclesiastical architecture equally with domes- who wanted their commissions and nothing else, tic building. Now architecture, together with all while to the architects the problem of church other branches of art, is the exact representation building was purely mechanical. It was a grievof existing conditions; that, therefore, chaos ous condition; on the one hand the Church ignoshould reign in domestic work is eminently just, rant of art and of beauty; on the other, architects

pening. I dare not say that it is a true repre- ment the history of this time, for in it may be sentative of the condition of the Church, so the most clearly seen not alone how architecture was only alternative is to say that this chaotic condi- utterly destroyed by Henry VIII., but also how tion of things should have obtained in the Church closely and exactly its vicissitudes correspond to which, before all else, should be permanent, those of contemporary life. If one were disimmutable, unwavering, is a scandal and a posed to doubt this intimate connection a review of this sorrowful time would be sufficient to bring

With the close of the great fifteenth century in vating, but creating art, the centre of artistic in- England, architecture reached the climax of its fluence, the impulse of all great artistic endeavor, progress, which had been glorious without pause we now find her indifferent, careless, accepting from the days of Edward the Confessor. For any cheap and tawdry fancies that may be sug- four hundred years and more, keeping pace with gested by so-called architects? Why is it that up the civilization of the people, architecture had to the period of the Reformation we find the grown from the first rude Norman of Canterbury Church leading art to all possible glory, while until it burst into the glorious blossoming of since then art and the Church have been utterly Christian art during the York and Lancastrian severed? I think there are two reasons: The dynasties. Under the beneficent guidance of the first is, it seems to me, that at the time of the monks and friars, England had grown great and Reformation much that makes Christianity beau- prosperous-great with true Christian greatness, tiful, idealistic and lovable was recklessly thrown prosperous beyond the fortune of most nations. away by England and the nations that accepted Finally, with the opening of the fifteenth century Protestanism. Of this reason I have certainly came what has been called "the golden age of no right to speak. The second reason touches the workingman," and as a result this new prosme more nearly, and it is this: that during the perity, which owed so much to the labor of a last days of Henry VIII., and through his humble priest, John Ball, became one of the deliberate action, architecture, and all other art causes of the great impulse towards church buildas well, was utterly stamped out of England as ing which marks this beautiful but slandered

When the House of Tudor succeeded to the sorrowful days art has been compelled to seek throne there was scarcely a town in England

where a new parish church, fresh from the hands under the greatest of the Stuarts was a good of loving workmen, could not be found, or at least where was not some tower, or chapel, or chantry, or tomb newly added to the parish church, which was truly the centre of life of every knot of people. It was the flowering of Christian civilization.

But the architecture which was making beautiful the whole country of England was by no means, in itself, the last word of the Gothic or Christian style. Beyond the marvelous fabrics of the first years of the sixteenth century lay still infinite possibilities. The chapel of Henry VII. at Westminster, Kings College chapel at Cambridge, St. Mary's Radcliffe at Gloucester, these matchless buildings were by no means final; the building impulse was still at its height; the religious incentive had weakened not at all; the future seemed bright with promise.

Under Henry VIII, came at a blow the destruction of English architecture. From the day of the separation of England from the Roman obedience the doom of architecture in England was sealed. Like a second "black death" Henry's infamous emissaries swept over England leaving desolation behind them. The people rose in valiant defence of their guides and protectors, the monks and friars, but their struggle was in vain. Abbeys and monasteries, cathedrals and churches, shrines and tombs, fell the prey of mercenaries. Desecration took the place of consecration. Churches were no longer built but destroyed. Abbeys and convents and monasteries, once centres of education, charity and benevolence, were blasted as by fire, and turned over barren and desolate to the conscienceless knaves who had obeyed the orders of a most evil King.

When Mary I. ascended the throne she found desolation where once had been gardens and orchards and shady cloisters. She strove against the bigotry of a class of people who had fallen under the influence of her predecessor, and would have restored the property of the Church to its rightful owners, but her efforts were cut short, and under Elizabeth the work of Henry VIII. was continued.

Architecture as a vital art had come to an end in England. It had died a violent death, not a death from exhaustion.

Under the Stuarts it seemed that a new life might be restored to the dead art, and under James I. and Charles the Martyr attempts were made to bring the beautiful style, killed under Henry VIII., to life once more. The peace and plenty that came to England for ten happy years

foundation, and the strong hand which controlled the growing Puritan fanaticism gave promise of ultimate religious peace. But any hopes in this direction were futile. With the martyrdom of the King and the triumph of Puritanism all hope came to an end.

For two centuries England was barren of Christian architecture. The religious impulse was dead, and little by little all capacity for artistic creation died also. England sunk swiftly in the scale of civilization, and with the close of the eighteenth century had lapsed into an industrial, social, intellectual and religious condition which it would be hard to parallel in her history. The policy of Henry and of Elizabeth had won its reward.

During the dark ages of the eighteenth century ecclesiastical architecture was non-existent. Early in the succeeding century, however, came the first movements towards a reform of the current barbarism in life: the factory and labor laws. Religion was still prostrate, and the Anglican Church had fallen into a condition of such hopeless lethargy that she seemed beyond all hope of resuscitation. Reform was in the air, however: in fact, men began to realize that the next logical step beyond the existing condition of things was one hardly pleasant to contemplate. In the year 1833 Keble preached his sermon on National Apostacy. From that day began the movement which raised the Establishment from destruction. The influence of the Oxford movement spread like flame; the conscience of the nation was aroused; there was new life in the air; it showed itself everywhere.

It is sometimes said that the Oxford movement was due to the Gothic revival, and sometimes that the latter was due to the Oxford movement. Neither of these theories is true; both were manifestations in different directions of the same great animating impulse. Men were awakened to the consciousness that the last three centuries, if they had not been a mistake, had at least been most misleading, in that they had resulted in the practical barbarizing of England. Therefore arose an impulse to go back to the parting of the ways to rectify the evil that had been done.

The success of the spiritual revival was vast. Economic reforms kept pace with it, and in fifty years England had been saved from the danger that had threatened her.

As a result came a new life in art, for art, as I have tried to show, is always the outgrowth of a time-not an accident, but a result. The work of the Pugins was the beginning of the new architecture. In quick succession came the great during the past three centuries she has been Gothicists, Street, Scott and Sedding. It is sig- cursed with grievous sleep, we at least can urge nificant that of the leaders in this architectural that at last she has awakened, that new life has revival, the Pugins, Street and Sedding were all entered her, and that, throwing off one by one ardent and zealous Catholics. Simultaneously the errors and heresies that so long have bound came the great painters of the Victorian Renais- her, she has taken up with renewed strength the sance, Dante, Rossetti, Watts and Burne-Jones, work brought so nearly to an end in the sixteenth and with them Morris, in some sense master of century. all, and Walter Crane. In literature, the Renaissance was equally brilliant, but of this there is great days of the fifteenth century for inspiranow no occasion to speak.

ligious revival, it was what only could have been, centuries, and taking up once more the glorious the Christian traditions and principles of the fif- architecture that was annihilated under Henry teenth century restored to life again. Of course VIII., raising it to higher glories yet, thus symdelicacy.

Victorian Renaissance prove but a temporary Church. brightness, a promise without fulfillment, the fact wilderness.

in harmony with justice and with Christianity.

Therefore as she returns in a measure to the tion and incentive, so should she return also in As for the architecture which followed the re- architecture, bridging the empty hiatus of three in some measure the new work must be halting bolizing the renewed vitality that has entered and uncertain; an art that has been dead three her. To take up this uncompleted work seems centuries is not easily to be revived. But from to me the duty of the Church. To her we owe the days of the elder Pugin there has been a the glories of Mediæval art, why should we steady advance, until in the late John D. Sed- not owe to her the new life of architecture, ding seemed to be born again the beautiful old raised from the chaos where it has so long wanfifteenth century spirit in all its fullness and dered. This is perfectly possible, but so long as the Church is willing to accept every fanci-Yet of late there has been a weakening of the ful architectural style that offers, the chance of followers of the Christian style of architecture; fulfillment is very small. Let the Church take there has been a wandering off after strange gods, a firm stand, insisting that her building shall Is it that the moving spirit is failing? It were be representative of her history and of her life, hard to think that. Rather let us believe that it and in one style, the style that was developing is only a temporary halting, a yielding for the so brilliantly in the early sixteenth century, moment to the tremendous pressure of the bar- and in a short time we shall have a calm, steady barism that is still so powerful. Yet, whatever influence working in architecture which would the result, even if the architectural revival of the be the salvation of the art and the glory of the

I have tried to show that architecture, together must remain that with the period of the Reforma- with all art, has a very decided religious aspect; tion architecture ceased to exist in England, and that at the time of the Reformation architecture that until the Oxford movement gave new life to in its nobility was annihilated in England, that its the art, England, architecturally, was a barren present low condition is due to the chaotic state of affairs that has existed for so long in religious Is it not clear from this that architecture has a and spiritual matters, and that such noble archireligious aspect? I think you must acknowledge tecture as we now possess, in a few instances, is it. At present its condition is one of black chaos due almost wholly to the religious revival of the shot with sudden flashes of vivid genius. It can early part of the century. I have also argued only become great and glorious again when the that the existing chaos in domestic work is quite evil conditions of society and of life under the representative of contemporary conditions, and present regime have changed for something more that while such chaos may have justly expressed the religious condition which has gradually devel-They who believe that architecture may be made oped during the last few centuries, it can no honorable through the establishing of architect- longer do so, since the Church has awakened to a ural schools are nourishing a very vain delusion. new strength and clearness of sight, wherefore Secular architecture at present is exactly and only she is swiftly correcting the errors into which she what it can be; but this is not true of ecclesiasti- had fallen. And this being so, I have urged that cal architecture. It is not pleasant to admit that she look once more upon architecture as a most the Church has yielded to the influence of the useful ally, that so she may manifest herself to world, though only too often facts would urge the world with a splendor and a strength that us to do so. Yet even were we to grant that shall increase gloriously as she wins back the

in this wise shall she not only stand beautiful and majestic once more in the sight of men, but also shall she come once more to be the patron and protector of art, until not only has she raised ecclesiastical architecture to honor again, but, as her influence becomes once more dominant in life, domestic architecture also, for it may be granted her even to destroy those evil social conditions which now make art impossible. And thus shall the splendor of the Renaissance be repeated again in a Restoration which shall be not alone a restoration of beauty and of art, but of poetry and of idealism, and above all of a renewed and glorious Christian civilization.

If in what I have said there is anything of offense let my excuse be my absolute conviction of its truth. Ralph Adams Cram.

The foregoing address was delivered by Ralph Adams Cram before the St. John's Theological School, Cambridge. It merits from more than one point of view the attention of our readers, and for the privilege of reprinting it this magazine is indebted to the kindness of the author. An attempt is made by Mr. Cram, in this paper, not only to define the relation between religion and art, but to apply his definition to the present deficiencies of ecclesiastical architecture in this country and in England. I am sorry I cannot wholly accept the conclusions to which Mr. Cram arrives, and I propose to supplement his address with a few remarks from a rather more liberal point of view. The question is one, be it observed, that belongs less to the "practical architect" than to "the professor of æsthetics." I am neither, but if I can apply a few generally recognized æsthetic principles to the difficulties propounded by Mr. Cram I may do something to assist the cause of clearthinking.

That the present condition of our architecture, both ecclesiastical and secular, is not all that might be desired, I suppose every competent architectural critic will admit. Indeed, I will go so far as to say that an enormous majority of the buildings erected at the present day in this country lack the one element that makes architecture a fine art; they lack fullness and dignity of expres- forms or grotesque vulgarity—a stage which is, sion. Architects cannot object to this statement, of course, reached in the work of our least meribecause they themselves have denied that they are torious designers. Mr. Cram speaks of the artists In the resolutions passed by the Ameri- "riotous eclecticism" which characterizes our can Institute at its last annual meeting in refer- present architecture. The phrase is too severe, classed as one of the professions, and any one best architects; but it is in the main just. We

honor and power which are hers of right. And who is accustomed to talking with architects knows very well that they usually consider themselves professional men. The generally recognized difference between a profession and a fine art is that the former can be acquired by any man of fair abilities, while the latter needs for its pursuit a peculiar gift. Consequently it would seem as if our architects considered that there was nothing in architecture which could not be learnt.

In saying this I am, perhaps, stating the matter a little strongly. The practice of any profession demands a certain amount of talent, but the talent in the consummate lawyer is not so important as his knowledge. He could get along better without the former than without the latter. In the same way it would be more correct to say of our contemporary architects that they place more reliance upon the elements of an art that can be acquired than upon those which are necessarily temperamental. All the deficiencies of our architecture are but illustrations of this fact. Our best architects have taste, intelligence, skill and knowledge. The skill and knowledge are acquired; the intelligence is native but it is not an artistic trait; the taste also is native but even when supplemented by knowledge and training it is never adequate, for taste may be defined for my present purpose as only the temperamental power. Hence it is that the criticism most frequently to be passed on many of the good buildings of the present day is that they are wanting in composition. They generally contain admirable features; but the features are not fused into an artistic whole. Taste, you see, is a suggestive rather than a constructive faculty. It needs to be supplemented by imagination in order to produce any completeness of expression in art. The errors of architects a little lower down the scale are exaggerated examples of the same deficiency. They have less taste, less skill, less knowledge and less intelligence than their brethren. If the work of the latter lacks harmony and vitality, the work of the former is often characterized by flimsiness and commonplaceness of design. Marked incongruities take the place of parts that do not fit; pretty features degenerate into patent devices; and the whole tendency is towards either slavish imitation of ence to competitions, architecture was distinctly if we confine our attention to the work of our

may need to use many styles for the many differ- form of art only under such conditions, then the

ing society can have some of its elements without demnation it is interesting to trace. having all. Dropping for the moment national distinctions, I for one would not care to say that a vidualism, rationalism and materialism permits at society which made possible Victorian poetry best only an external and mechanical relation becording to Mr. Cram, is the only source of fruit- means of placating the spirit for its pursuit, the rich ful artistic creation in this putrid age. In the will generally deserve a bad reputation. The prevsame way a more cautious critic than Mr. Cram alence of the conception in both Catholic and would hesitate to describe as sordidly decadent a Protestant societies that the spiritual life contains society which, at its best, seeks so eagerly, so no place for individualism, rationalism and the courageously and so persistently for the realiza- pursuit of wealth really causes what antagonism tion of a better life among men, and yet is so de- there is between religion and reason, religion and termined, if building is possible, to build only on wealth, and religion and the individual. the broadest, deepest and most stable human tell a man whose nature is predominantly rational foundations.

enthusiasm directed and dominated by an eccle- wealth, the business man is very likely to answer, siastical organization. If we can have such a "Very well! in that case, I will pursue my own

ent kinds of buildings which modern life requires; end of the nineteenth century is to be congratubut these different styles should have a signifi- lated upon the fact that it cannot build Gothic cance of expression as well as a diversity of form. cathedrals. At all events, Mr. Cram's identifica-Mr. Cram seizes upon the obvious fact that our tion of art with religion is in truth only the modern architecture is, at its best, the result of identification of one kind of art with one form of taste and skill rather than the happy man and the religion. The true religious spirit is more powerhappy moment, and declares that therefore our ful outside the Church than it is within the modern architecture is damned. For, with that Church, and we must always remember what Mr. superficiality, he says, which characterizes our at- Cram always forgets, that the true religious spirit titude toward serious things, we look on art as is infinitely various. It is not simply belief in a something which may be purchased or acquired, creed, susceptibility to profound religious feeling, failing utterly to understand that it depends for or a highly emotionalized kind of advanced its development wholly upon a "certain condition morality; it is any striving after a higher life. It of life"—a condition separated from the rational- is not divorced from business, scholarship, ism, materialism and individualism of the present thinking, or any work in one special direcday by Infinity itself. In this way does Mr. tion; it can be realized in every kind of effort. Cram inveigh against our "sordid period of de- Mr. Cram misunderstands individualism, rationcadence" until all his readers will be convinced alism and materialism because his creed contains that either the time or Mr. Cram is very much no place for these elements of life. He condemns out of joint. Art is a wide term and com- them not merely as the excess of things that are, prehends much that Mr. Cram would consider to in their way, substantial and legitimate contribube quite inartistic; life, too, is a thing of some tions to the wholeness of human nature; but by compass, and it is perfectly possible that the drawing the strongest kind of a contrast between "certain condition of life" which is necessary to them and a vital religion he condemns them art may be so complex in nature that our prevail- absolutely. The logical result of such a con-

Mr. Cram's unqualified condemnation of indiwas a society which put a deadly blight upon art. tween the two most important sides of our nature; Neither can we associate Victorian poetry too and such a relation always means that both sides go closely with the Tractarian movement which, ac- to an excess. In a society where wealth is only a that the use of his reason will never lead him to-The nineteenth century is filled with spiritual wards the highest truth, instinctively he will anpower. We do not build Gothic cathedrals swer that if such is the case he is perfectly willequal to those of the thirteenth century; but ing to do without the highest truth, and his ecclesiastical architecture is not the only medium future thinking will very possibly be determthrough which the human spirit can be revealed. ined by the belief that his own reason, which the Let us be thankful for what the Church accom- strongest instincts of his nature force him to deplished during the Middle Ages; but if the Church pend upon, contains within itself no possible relahas lost its hold upon mankind it is because man- tion to Infinity. He will use his reason against kind has outgrown the Church. The Gothic the Church which will not give it a place. In the cathedrals were not the result of religious enthu- same way, if the representatives of religion place siasm as such: they were the result of a religious a necessary stigma upon the accumulation of

cise leads to no vision of the higher things.

spare language in describing the society in which they predominate. But, admitting that these ends are in many cases pursued too mechanically, what ought to be our attitude towards them? Manifestly we should try to stimulate what is good in them and curb what is bad; and this can be done only by meeting the individualist, rationalist organism like society reacts on that part by deinto the discussion of some sweetness and liber- other road to the temple of Truth. ality would in the end tend to bring about a certain measure of agreement.

lacks dignity, fullness, or appropriateness of ex- and our zealous propaganda of the value of art in

path irrespective of religion." And so life is pression. But this admission does not commit broken up by a religion which assumes an author- me to all that Mr. Cram says about the futility ity over all the legitimate instincts of mankind and superficiality of our conscious striving after without giving any of them an individual sphere. art and its message. It is true that those who No wonder rationalists and individualists go to possess this striving are hampered by their suran excess when temperance within their peculiar roundings, and it is true that there is an element provinces has no divine sanction, and its exer- both of the ridiculous and the pathetic in the foolish efforts of many people, much better Whether, as a matter of fact, in our present adapted to other occupations to reach after a society our individualities are too aggressive, prize which they are not capable of grasping. our rationalism too thorough-going, and our pur- Yet is it not better to strive consciously after the suit of wealth too absorbing, is of small import- message of art than to sit contented in its ance to the present discussion, for Mr. Cram con- absence? If people were so completely absorbed demns them without qualification and does not in money getting that they had time for nothing else, then, indeed, our society might need some prophet of evil to make them aware of their responsibility to the spirit within. But to my mind one of the most admirable traits of our contemporary society is that it reacts immediately against an excess or a deficiency. The fact that so many of us are too much absorbed in business and and materialist on his own ground. So far as pay too little attention to art and literature drives individualism is too aggressive, it tends not merely others to protest vigorously against such baleful to destroy the humaner feelings, but to commit absorption and to seek eagerly for the message suicide; for the bad working of any part of an that art and literature brings. This is the result of that very individualism which Mr. Cram mismoralizing the whole. The fact that individual- takenly identifies with arbitrary personal capriceism is able to make the conquests that it does Doubtless the manifestations of true individuality make proves that the good in it at present out- among us is associated with much that is arbibalances the evil. This being so, we can attack trary, capricious and worthless; but the real the evil only from the point of view of the good. thing is cheap at such a price. When in any so-In spots and for a short time there is certain to be ciety diversity of temperament finds expression, friction; but the lapse of a few years soon re- that society is not allowed to forget itself in an stores harmony. In the same way a rationalist, excess. The worse the intemperance becomes the so far as he is wrong, cannot be refuted by greater is the resistance it arouses. Hence it is being called a fool, an atheist and a wicked man; that our modern civilization is self-corrective as he must, as it were, be answered from the inside. no previous civilization has been. It does not His excess of rationalism must be shown to be wait until evil ways have brought it to the verge irrational, and this can be done only by indica- of destruction; it has sufficient power to reform ting as well how far he is right. An address like the evil before substantial corruption sets in. Mr. Cram's would never make an opponent desire This is the characteristic of what Walter Bagehot a fair and fruitful discussion. It would simply has called an "age of discussion." Our conflict arouse the rationalist's indignation and contempt of ideas is so wholesome and stimulating that I by its complete ignoring of all that the activity should scarcely hesitate to call it one of the best of reason can do and has done for the human results of the process of civilization up to the race. I do not say that a discourse written in a present time. It makes a conviction what in the more catholic and discriminating spirit would of beginning a conviction ought to be, viz.: the exitself be much more likely to convince an pression of a temperament; not the slavish adopopponent, but it is certain that the introduction tion of ideas imposed from without. There is no

Hence it is that I admire this conscious striving after art which Mr. Cram takes to be so worthless. I have admitted that our best American archi- Worthless it may be in its immediate artistic retecture at the present time is essentially sult, but morally it is all that we have any right the work of skilled professional men, that it to expect. If we continue our conscious striving human life we may in the end bring about that not so rare as those needed for artistic creation. art. In spite of the great spiritual significance very conscious striving which is not necessary of the "age of discussion," it is not favorable of (although it may be useful) to an artist. Like itself to artistic production. A serenity, an ade- everything worth having, it is based upon temquacy of temperament to its aspirations which is perament, but its ideal is the realization of a given utterly lacking in our present society, is needed temperament by bringing it into organic relation that poetry, the art in which ideas are most consciously expressed, the art which permits the soon and in what way the happier "condition of life" will emerge from the prevailing conflict of ideas and individualities I do not know; but I know that the conflict is necessary to found our superstructure on the deepest facts in human nature, and I know that among the things which conflict tends to destroy is the conflict itself. It is always straining to reach the higher glory of fulfillment.

Meanwhile our current life is not so destitute of the higher opportunities as Mr. Cram would have us believe. We must take part in the conflict, but we need not be confined by its limitations. By this I do not mean that people who possess aspirations without gifts should set up as artists. The extent to which this is being done at present is, as I have said, both pathetic and ridiculous. But although a man is not equal to artistic creation, he may be fully equal to the next best thing—a thorough and liberal appreciation of the art that is. I admit that even this cannot be fully acquired without certain gifts, but the gifts that are needed for the acquisition of culture are jarring elements in contemporary society.

"condition of life" which is the prerequisite of The point is, however, that culture demands that for the noblest imaginative flights. Hence it is with the deepest and most significant things in life. From this point of view it may be defined as the meeting point of art and morality. An greatest divorce between the inner vision and artist may think that he is satisfied with his own its concrete symbol, is the only art, save revelation, but satisfaction with any one phase that of music, in which we excel. How of art or with any one interpretation of life is death to humanism. Culture presupposes amid the many real diversities the spiritual unity of all the manifestations of the human spirit; it presupposes that no one manifestation is complete; it demands that a man shall try his best to make all of those manifestations his own. It proves the validity of its own presuppositions by realizing them. Can any one fully appreciate mediæval art without having appreciated Grecian art? Can any one master Browning without having mastered Shakespeare? And if one has in a measure come to a realization of Goethe's vision of life is he not thereby enormously assisted in his appreciation of the whole of German literature? We may have specialists in the study of comparative art; we may have our preferences based upon our temperaments amid the various artistic manifestations; but in culture as culture there are no specialists, This ideal of humanism is essentially modern. It is one great contribution of the thought of the nineteenth century to the philosophy of life. It is compensation in full for all the

Primus.



CORRESPONDENCE.

ANENT THE "DAILY RECORD" BUILDING OF BALTIMORE.

Editor ARCHITECTURAL RECORD:

In the last issue of this magazine a certain critic has pretty badly abused one of my buildings, the *Daily Record* Building of Baltimore, and has painstakingly endeavored to prove the designer utterly, absolutely and needlessly to blame. It is easy to criticise, even the best of work, especially where the critic hides behind the screen of anonymity and clothes himself in the disguise of the editorial "we;" but I conceive his criticism to be so unjust, so malignantly distorted, that I ask to be allowed, in common justice, to defend myself.

It is not that I care for the critic's opinions, but some of the public may happen to read them and suppose them true, and I should in consequence suffer. Really, the article is so like abuse that I hardly know in what way best to answer or where to begin. The critic abuses the building; the various reasons for so doing being, as he states, as follows:

Treatment of the narrow front, because it has not horizontal lines; because, from inference of his text, it has more than one opening in width. He says "the sacrifice of the front is made of course for the benefit of the tower at the angle."

This is not true, for it is not sacrificed at all by the mode of treatment adopted; on the contrary, the preliminary sketches discovered this method, as the best to relieve the front from the tameness and the commonplace appearance, the treatment suggested by the critic produced. But even if the front did suffer by this treatment it was not because of the desire to have a tower; but because of the necessity of the increased room given by the "oriel" at this point. It is the wildest exaggeration to say, "two buildings have been made instead of one in this 16 feet space," as does the critic—since the spaces between the heads of windows in one story, and the sills of those above, are only recessed 4 inches; are built of the same brick as the rest of the walls, and, further, the reveals are of rounded or bull-nosed brick.

But in the illustration, a designed falsehood has been perpetrated, in drawing by hand on a photo-

graph thick black lines at these reveals, and in certain other places to which the critic objects-a thing against possibility or truth. However, the critic did not care by what means he carried his point of maligning the building. He says I intended what is a polygonal sash frame to be regarded as a tower. On the contrary, I never thought or spoke of it as a tower. The specification and plans always referred to it as "The Oriel," and the "tower" idea is the conception of the critic. A further deliberate misstatement is to say that the illustration does not show the full measure of the defects. contrary is the case, since the view is taken from the level of the fourth floor windows, whilst the building was designed for the effect as seen from the street, a view which is had a thousand times for once from the level of the roofs of the opposite houses; and therefore in the view the tower story or basement has been diminished out of actual proportion, and in fact much of the building is shown upside down. Now if the structure at the angle is only a sash frame, as it truly is, and as the critic indeed says in the same breath that he invents the title "tower" for it, there is no impropriety in constructing it over the opening, which opening below, by the way, was of course necessary.

As to the unpardonable sin of this window being constructed of wood covered with galvanized iron. My specification shows that originally this was proposed to be of copper (as were all the metal portions), but I was compelled to use galvanized iron, much against my wishes, in order to reduce the cost. Probably the copper might have been as objectionable to the critic, who would have used heavy stone, or brick, and so committed the fault of which he wrongly accuses me; making a heavy structure over an opening, whereas I used, and was honest enough not to pretend otherwise, light metal construction for the projections.

He abuses the long front, because it is not symmetrically divided up; that is, that the stairway does not come in the centre of its length. He abuses the bay window projections because there is a row of them; because, he says, the pur-

pose of a bay window is lost when a man can see into his neighbor's windows. As regards symmetry, so far as one end of the building being learn that this is essential, unless, indeed, in a strict classical design, and if I have erred in this respect I am in excellent company. But the departure from symmetry was a matter of necessity arising out of the plan. Had the critic taken the trouble to look inside the building, and had he been unprejudiced enough to admit it, he would have acknowledged that to locate the stairway in the centre of the length would have utterly destroyed the economical and advantageous arrangement of the offices, and that so far as plan goes my arrangement is the best possible. The length of the building would not have been enough for six offices, though it was possible to get in five, and of course it was necessary to get in as many as possible. (I may parenthically remark here that every office in the building is rented.) If it be best for the internal arrangements, why not be honest and show it on the outside? I hold that the exterior of a building should conform to the interior. Apparently, if the critic means anything he means that the building is hideous because it is not a reproduction of some severe classical form. Somehow, I fancy he must be either very young or very bigoted.

I remember when I thought classicism was perfection (I was brought up in a thoroughly classical school), and that everything without a precedent in Sir Wm. Chambers' or Vignola was loathsome. And afterwards I admitted the strictest schools of English and Continental Gothic to my faith, and I swore by the old gospel of Classic work, and by the new gospel of Gothic work; but everything should be literally quoted therefrom, and nothing should originate outside. And there were many like me. And all this time we heard the frequent cry for a new style of architecture, and some attempted it, but they failed, because they were bound in the chains of their early training, and they failed to perceive that the style of a building should be the intelligent and gradual growth of the needs of the times, of the purposes of the structure, of the structural means or materials. A great change, however, has taken place, and there is more likelihood of new types of architecture arising now than ever before-at least, in the recent centuries-for so many of our buildings have such a number of stories raised one on the other, they are built of such dimensions, of such proportion, the new devices of methods of using materials are such that one would indeed be blind and unintelligent to confine himself to the same gamut which served the designers of old.

I do not wish to be misunderstood. Had I to same size, or length, as the other, I have yet to design a temple, an art gallery, a triumphal arch under the same conditions as controlled the masters in Greek, in Roman, in Renaissance, I believe a strict and humble patterning after them might be nearest to excellence. Had I to build a cathedral in a spacious close with years in which to erect it and no thought but to use stone for ceiling and cut stone for pinnacle and for window tracery and for the wealth of beauty which the old Gothicists spent on their work-I, too, would strive to design in the way which they brought to such perfection. But for our modern city buildings these old types are frequently entirely unsuited, and the most successful of them are but compromises, and some of us try to fool ourselves by claiming that they are in this or in that style, or we may go so far as to say "an adaptation" of it.

There are certain cardinal principles of construction to be observed, certain defects to be avoided, such as the superimposing of weights, heavy piers over voids (though even this has to be done often to give the merchant the store windows he requires, and in these days of iron and steel construction the educated builder who knows how it is done, and how safe it is, learns to govern his criticism accordingly); but within these lines the builder should be free to shape his work as best suited its needs. Another very important point should be remembered in considering such buildings. It is a legitimate need of most commercial buildings that they should be distinctive. As in selecting the title of a book, as in phrasing or displaying an advertisement, the aim is to attract notice. It is no use to put on airs of dignity: it is one of the necessities of the time, and being a necessity, it is, I claim, as I said, legitimate. Hence in such buildings it is proper to introduce features (which otherwise would be superfluous) so long as they can serve that purpose, and some structural reason for their existence can be shown. In the building in question, the corner oriel has been introduced, firstly and mainly, to give additional room to the offices. Secondly, this oriel gives a straight view down four streets, which would be unavailable otherwise. Lastly, and no despicable reason either, it gives a prominent feature to the building, which is of great value to it as a commercial building. It enables it to be recognized at a considerable distance in at least four directions. Again, this anonymous critic should learn that a small building must needs be treated differently from a large

building when one of the needs of the building is to attract public attention. Had this block been of great magnitude, like the "Equitable" in the adjoining square, its size alone would have given it the necessary attraction; but a quiet building, as your critic suggests it ought to have been, would have been, artistically, simply insignificant, and commercially a failure. The lot at my disposal was exactly 17 feet 5 inches wide; out of this I had to take the thickness of two walls. Will any competent and fair-minded person look at the plans and say that either bay windows or oriel could be dispensed with to its advantage? Further, this oriel helps the narrow façadeit makes it look wider than it is; and it does it in two ways; it actually adds to the width (about 14 per cent or 15 per cent, indeed), and also it disguises the real corner when facing the building obliquely, so that you can not definitely limit the apparent frontage. It has been a matter of frequent comment by the passers-by, how much wider this front looks, than they had expected when the building was started. Now, having created this oriel, it required a roof and a termination. I suppose your critic would have put a flat roof on it. Well, I am thankful to say I would not, and did not. It is very easy indeed to throw ridicule on anything; it is very easy to call this roof an "Extinguisher." It is true candle extinguishers have very commonly been made of a cone shape—as is this—but therein is the only similitude.

It reminds one of the similitude discovered between Monmouth and Macedon—both places began with M and both had rivers. One might ridicule Trajan's column and call it a candlestck, for it bears as much resemblance to a candlestick as the oriel roof in question does to a candle extinguisher.

The critic speaks of "Variegation" of the skyline. I do not know if he used this word in ignorance, or purposely chose a word which would still more ridicule the building. Certainly, as in nineteen cases out of twenty the word has reference to color, it is not the proper word to adopt. But to refer to the thing itself. If he would have preferred a straight, unbroken skyline, of course he is welcome to his opinion, but it does not follow that he alone is right. I maintain that the gable in the parapet is justifiable, accentuating, as does the pedimental doorway, the main entrance. The pinnacles, also, to which he objects are legitimate,

as they stop the projecting cornices where we would not have had legal right to return them round.

I will refer to another stricture of this great critic. The coloring of the building, he says, is preposterous and vulgar, the wall being, he says, of dull yellow brick and the galvanized iron-work cream color. It is in the power of even far-away readers of this magazine to test this person's truthfulness on this point, since the walls are built of the Sayre & Fisher (of Sayreville, N. J.) "old gold" brick, one of the most beautiful bricks on the market. Not in any sense a "yellow" brick, but a rich golden brown. Not in any sense a "dull" brick, for the brick is burned so hard that it has a semi-glaze, and the metal-work is as near an ivory white as can be obtained for out-door work. Certainly this combination is not open to the charge of vulgarity. It would seem, however, that the wish was father to the thought, and that the same reasons which led him to select an insignificant building like this in Baltimore for an attack caused him to stray far beyond the limits of truth in order to try and show ground for his malignancy. As for the badness of detail, of which he speaks in a vague and general way, I cannot for that very reason of vagueness say anything. He of course is entitled to his views, such as they are; for myself I have no objection to have a full set of large photos of the details published, and an independent public form its own opinion, if the editor cares to do so.

The Designer of "The Daily Record" Building.

[The only accusation made by our correspondent that seems to demand notice is that "a designed falsehood has been perpetrated" in the illustration "in drawing by hand on a photograph thick black lines." This is quite unfounded. Whatever retouching of the photograph was done, was done that it might be more effectively reproduced, and was done without the knowledge of the author of the criticism. Neither was the author aware who the architect was.

For the rest, readers of the criticism and of the architect's letter may be left to a consideration of their several positions, with the aid of the illustration.—Ed. Architectural Record.]

RAYMOND LEE.

CHAPTER XI.

THE BOOKSELLER'S DREAM.

PPOSITE the west entrance of the cathedral stood a row of stores—six or seven low, two-story, brick, boxlike buildings, inhabited by some of the smaller tradespeople of Eastchester, where widow commerce, which deals in small articles of millinery, children's confectionery and such things, was carried on. These houses had existed for at least three-quarters of a century; but right in the centre of the group was a "survival" of still earlier days—a low, stooping building, fully one-half of which was a steep, slanting, rickety roof, pierced by two small dormers. The latter were capped with little cock-eyed gables which had become very much awry during the great number of years in which they had looked up at the towering cathedral opposite. The entrance to this ancienter building was below the level of the street, down a couple of uneven stone steps. Over the low, dingy, shop window was a much-weathered sign, which read:

ISAAC WART, BOOKSELLER.

And, to remove any doubt about the veracity of the legend, in the window was a disorderly jumble of old dusty volumes. Descending the two steps and entering the low door on which a loose bell jangled to give warning, a visitor found himself in a gloomy store, surrounded on all sides by a disorderly collection of books, pamphlets, and magazines, ranged on shelves against the walls, piled carelessly on the

floor-for the greater part, the dead literature of half a century and more ago. I have spent many a half-hour in Mr. Wart's store, though it is so melancholy a place for a scribbler, and, in a spirit of fellowship and respect for the dead, as a sort of rite which an author owes to the departed, I always purchase at least one of the old volumes there, and I have set apart on my bookshelves a space for a little mortuary chapel where these ancient 4to., 8vo. and 12mo. mummies repose—in peace. Perhaps, some day, some kindly spirit will do for me the pious office which I have performed for "The Posthumous Works of Mrs. Chapone; containing her correspondence with Mr. Richardson, on the subject of Parental Authority and Filial Obedience, etc. these is prefixed an Authentic Life of the Author, drawn up by her own family;" "The Tablet of Memory; A Treatise on Self-Knowledge, by John Mason, A.M., very beautifully printed by Ballantyne;" "Sacred Biography, or the History of the Patriarchs, by Henry Hunter, D.D.;" "The Miniature, being a Collection of Essays upon the most interesting Subjects, upon the Plan of 'Microcosm,' by Gentlemen, at Eton College;" "The Poetical Works of Hector MacNeill, Esq.;" "Les Amours de Catulle, par M. de la Chapelle, Avec Approbation et Privilege du Roy." The-But why enumerate the unknown? Melancholy Brotherhood of the Forgotten; I wonder whether your shades hover gratefully over my bookshelves?

Isaac Wart, himself, was an antiquity, like his books—an aged, dwarfish being whose shrunken, malformed legs compelled him for the most part to wheel himself about in a low chair. Every one of his bodily members seemed moribund, except the small, quick, dark eyes under the black skull-cap which he always wore, and his long, white, corpse-like hands into whose nervous motions, apparently, all the physical life of the man passed as all his mental activity did into his eyes. For more than twenty years, Isaac Wart had lived a mole-like existence in the perpetually dim light of his store. On the rarest occasions only did people see him wheeling himself about in the street. As one may easily understand he was a notoriety in Eastchester. Everybody spoke of him as "old Mr. Wart," but they knew nothing

about him. He sold books, and lived with his sister, an elderly person, and her young daughter, his niece—that was very nearly all the information they possessed.

Nearly two months after Winter's visit to the Smeltham schools, Mr. Wart was seated in his wheel-chair in the rear of his store, directly under the small glass skylight, through the dirt of which filtered a dull, gray light. A little table by the bookseller's left elbow was stacked with opened books. He was bent, writing impetuously, using his knees for a desk. As he covered a sheet of paper with cramped, jerky characters, he tossed it hastily to the floor.

In the gloom of the store, a small, pale-faced girl, with a little black pigtail down her back, sat on a large book with her hands crossed on her lap. She was "watching shop;" and her melancholy, violet eyes were fixed now on her worn, rusty, brown shoes, now on the wall-shelves opposite her, seeking some resting place for her attention. Presently the door of the store opened with a jangling of the bell. A young, fair-haired man in shabby, pinching clothes, entered. The girl's face brightened. The old man glanced hastily at the newcomer.

"Oh!" he cried, querulously. "I wish you could come in without setting that bell ringing so. It drives away my ideas (his voice dropped to a whisper) as church bells do devils."

The dwarf threw back his head, his eyes closed wearily, and his bony, white fingers began to tap nervously on the arms of his chair.

Without saying a word, the young man went over to the girl. She quickly slipped her hand into his and pulled him through a door into a dark, narrow hall which ran to the rear of the house.

"What do you want, Mag?" the young man asked.

"Mama wants you. She's in the kitchen washin'; but first come here, I want you to see my flower."

"Where is it?"

"Out in the yard."

The yard was little more than a damp, paved passageway hemmed in by buildings. "There! Ray. Isn't it growing nicely? How soon do you think the flower will come?"

She threw her head to one side and looked up to the

young man.

The plant under consideration consisted of a couple of green sprouts in an old tin can. The girl had placed it on a window-sill to luxuriate in the dull light of the yard.

"Why, Mag, that's an onion!"

Mag objected to the tone of disparagement.

"Well," she said, pouting, "I know it is. Onions have flowers."

"I don't know, Mag; perhaps they do, botanically speaking; but I'm afraid if they do, the flower isn't the sort you're looking for."

The young man put his arm around his companion.

"Ray, you never know anything I want to know, only what uncle wants. I'm sure it has a flower. Haven't you ever seen any?"

"No, Mag," said the young man, smiling, "I have never seen an onion blossom, never seen one growing anywhere,

never seen anyone wearing one."

"Come to mother."

"I will inquire all about the habit of the onion for you, Mag, and if it doesn't flower properly, I'll see if I can get you some plant whose behavior is fit for a young lady's garden."

"But you have no money, Ray." This was said very

sadly.

"If I tell some good gardener what a nice little girl my Mag is, don't you think he'll send her a flower? Where is your mother?"

"Talking to herself in the kitchen. I heard her as we

passed the door."

The kitchen was a half dilapidated, scantily-furnished room, strung with clothes-lines, on which were a number of pieces of damp linen. In the centre of the room, bending over a big wash-tub, amid steam and soap-suds, was a haggard, elderly woman. Her back was turned to the door. She did not see the two enter. The girl crept a step or two into the room. The woman at the wash-tub paused

in her work to brush back her dishevelled hair from the perspiration on her forehead.

"No," she said resolutely, addressing some invisible person in the corner of the room. "I will not stand it any longer, Isaac. Not a day longer. I have served you faithfully, God knows, since poor Edward died. I tell you we are starving slowly. My little one isn't nourished. She is getting pinched: and look at these."

The poor creature pathetically extended her bony, red hands.

"Mama," cried Mag, alarmed.

The voice startled the woman.

"Dear me, Mag! how you frighten me."

"Here's Ray."

"Mag said you want to see me, Mrs. Finn."

"I'm getting so blind, Mr. Lee, I positively can't see. I didn't know you were in the room. Yes, I did want to talk to you. Dear! dear! somehow it gets harder every week to do these few things."

"Let me help you. I can do it," said the young man.

The woman smiled.

"Nonsense, Mr. Lee, a man do washing! I know you would, though, if I'd let you."

"Why not? I think I'll put out a sign, 'Raymond Lee, washerman; washing done here.' Wouldn't that read well? Eh, Mag? It would pay as well as bookselling."

"Yes, indeed it would," cried Mrs. Finn, energetically. "That reminds me, Mr. Lee, what I wanted to speak to you about. The new landlord was in again this morning, and Isaac had the old tale for him—Wait—Wait. Mr. Pilgrim is a kind...."

"What name was that-Pilgrim?"

"Ye-es; why?"

"Nothing. The name is uncommon, and"

"Oh! yes. I was saying he seems to be a nice gentleman. He's a writer or something of the sort himself, and all he says was 'Hurry up with that book of yours, Mr. Wart.' But patience will break," she continued sadly; "it will break like everything else. The rich may humor a fancy once in a while, but in the end they want their own, like

other folks. I don't know what Isaac is going to do. The poor-house would be better than this. At least, we'd get enough to eat there to keep body and soul together. But I have made up my mind. I'll leave Isaac. I'll take Mag away somewhere. I can do something for a living."

There were tears in the woman's voice.

"No, no; don't think of that, at least not just yet. We

will find some way to improve matters."

"Why doesn't Isaac use that three hundred pounds he's got? What's the use of keeping it? We made a living here once, before he got lost in that scribbling of his. He pays no heed to the shop now. You know, Raymond, there's nothing in it that any one wants to buy, and it's no wonder that we sell nothing. Why doesn't he let you have one hundred pounds to get some new stock? It would come back to him, and more, too; and we wouldn't be in debt, soaking old crusts, as we did this morning for breakfast. I told Mr. Pilgrim of it, and even he shook his head and said it was hard."

"So it is," said the young man, sadly.

The woman continued her washing. Little Mag began to cry.

"Crying's no use, is it Mag?" asked Raymond.

"No," sobbed the girl.

"Well, then, you and I won't cry. You stay here while I go and talk with your uncle."

When the young man entered the store he found the old bookseller still reclining with his eyes closed. He approached close to the chair before he spoke.

"Well, Mr. Wart," he said kindly, "how have you done

this morning?"

The bookseller opened his eyes slowly.

"Ah, Raymond, my boy," he said affectionately, taking the young man's hand in his. "I think I have been half asleep, dreaming." Then in a sadder tone, "Dreaming, am I dreaming, Raymond? Am I to awake by and by and find we have been fools with our hopes?"

Raymond was silent.

"No, no," cried the old man. "I don't think ours are

the hopes that deceive, Raymond. Surely the work is too great for failure? It is needed so much. I had a dream last night, Raymond "-the old man's eyes brightened and his voice softened and became even musical. "How bright it was! The moonlit shore, the purple sky, the waters like a sapphire mirror. I felt young as I did long ago, though I knew I was bent as I am, carrying this old humped back. In my ears there was an ecstatic voice: Thought singing to herself on the confines of her world; Plato's: 'The sound of the flute in the ears of the mystic.' A ship of opal, lit by the moonlight, sailed out of the horizon. I could see the iridescent hull beneath the dark water; and the sails were a blending of ever-changing colors. A young man like yourself, Raymond (the bookseller was holding his young friend's hand tightly in his), whose head was garlanded, whose spiritual presence was like yours-love and promise—beckoned me with a golden lamp. I sailed away into morning sunlight, so exquisite, Raymond, oh! so unlike our day. (The old man's voice was vibrating and quickening under the stir of excitement.) A land of green olive trees, of mountains hazy in the distance rose before us, and as our boat touched the shore music swelled in cadences along the strand like waves. The joy, Raymond, as I stepped to land! It struggled in this old crooked frame of mine. The paternoster which the world has forgotten was wrung from me. (The dwarf outstretched his withered hands.) 'Beloved Pan, and all ye other gods who haunt this place, give me beauty in the inward soul, and may the outward and inward man be as one. May I reckon the wise to be the wealthy, and may I have such a quantity of gold as none but the temperate can bear and carry.' I was no longer the humpback, the bookseller, I was with the gods (the old man arose. It seemed to Raymond for a moment that his stature was increased) in the heaven of Beauty which mankind in these sorry times has lost. What does the dream mean? It tells me to persist. We can't fail, Raymond. God will complete his work. Man's life must be beautiful as well as good before it is perfect. One will not be less than the other n the consummation of Life. The forgotten gospel

must be requickened. Men must be brought to see that Beauty, as much as Morality, is the will of God; that it is not the heathenish vanity, the mere gawd, that it is with us to-day. Oh, if I were but twenty years younger, Raymond, and free from my infirmity, I wouldn't be preaching through a book. I'd be a mendicant priest of God, of God," he cried shrilly, "calling men again to Beauty. But I am an old lamp burning low. I can only write. When the book is finished you won't let it fail, will you, Raymond? All my hope is in you. Your life must continue mine."

"How much more is there to be done?" asked Raymond.

"Of the book?"

"Yes."

"About one-half. Sometimes I have doubts as to the result, but it is only for a moment. The appeal will surely touch someone. There are so many rich men in England. Every week we hear of some gift; fifty thousand pounds to some hospital; one hundred thousand pounds to some institution. No, I don't fear: we shall get the money for the beginning. The rest will follow. Where shall we build, Raymond?"

The dwarf rubbed his hands gleefully. His pale face was

aglow with joy.

"It is hard to say. There are so many beautiful spots. I think I would prefer a high promontory on a rocky coast."

The old man was watching Raymond's face intently. He

spoke softly:

"How the sea flows through your life! It is well. Let it flow through it with its changing moods and colors and many voices. It is God. By the sea would do well. First of all we would build our monastery; that would be needed first. We could construct it of sea-rock. It should be buttressed into the very waves. The ocean itself should inspire our architect. Eh? The walks and corridors and windows could all open on to the waters. And when we had gathered our priesthood together—true artists like true prophets bearing witness of God—and the young workers and the neophytes, how our buildings would grow in beauty; how the soul of the sea would pass into statues and carv-

ing, freize, pediments and capitals, and its colors into painting and tapestry and stained glass and inlaid walls of pearl and mother-of-pearl, and domes of pink coral like the sunset gathering into form; and its sounds into music from organs with pipes shaped like Triton's horn! What glory, Raymond! Temples and halls and cloisters where the devout could work, not for their own vanity, as the poor artist of to-day does, but for the glory of the Most High, where the multitude could come to worship, behold every new revelation of God, go down in solemn procession from the temples to the sea and be bathed in its beauty. That is the artist's life, the priest of the Beautiful. His work could go throughout the land like charms and sacred relics to banish the evil of ugliness. We can't fail, Raymond. I must get to work. I wonder whether three hundred pounds will publish the book?"

The dwarf's enthusiasm had caused Raymond to quite forget the purpose that had brought him from the kitchen. He was in close sympathy with the old man, who had befriended him in an hour of need long past, and Raymond did not perceive that it was this sympathy rather than real participation that had attached him to the bookseller's plans. The two had lived together for years, reading, dreaming and working with an enthusiasm which had surrounded their narrow circumstances with a wide horizon. As the old bookseller's life closed in upon him more and more, year by year, by reason of his deformity and age, he had escaped further and further from constraint or pressure into spiritual dreamland. The extreme isolation, the pale light in which Raymond had lived, had blanched his character as a flower—but it was a flower of purity, and it grew by the never-silent stream of memory which flowed out to the sea where a little fishing village slept on the cliffs.

Raymond was revolving in his mind whether he should speak at that moment to Mr. Wart about what had passed between him and Mrs. Finn in the kitchen. It was not an easy matter to decide what to do, for it is scarcely an exaggeration to say that the vitality of the old bookseller was derived from his work; and he believed that it was the three hundred pounds, scrupulously treasured for so

long from more abundant days, that gave the promise of reality and stability to his work. He used to say it was that three hundred pounds which would keep his work down on the publishers' earth, and prevent it from soaring about in the clouds of the author's heaven. To ask the old man to relinquish this money, even in part, or for a time, was to impair his hopes and deprive him of the one certainty which was like a cordial to him in moments of doubt and dejection. Raymond was aware of this, and, particularly after what had just occurred, hesitated before opening the subject. What could he say? How could he utter one word about the three hundred pounds without appearing to the old man as a traitor and conspirator?

The bookseller sat down on the floor and began to gather up the sheets of his manuscript. As Raymond assisted him the latter's thoughts ran round and round the problem,

seeking for an opening.

The two were thus engaged when the bell on the shop door jangled, and Marian and Ralph entered.

"Customers," whispered the bookseller, looking up from the floor. "Go to them Raymond, I will finish this."

Raymond had been shop-keeper for so long that he advanced without hesitation to the newcomers. Due partly to pre-occupation, partly to the very dull light in the store proper, Raymond did not notice the faces of his visitors, until Marian, advancing to meet him, said:

"I am Miss Pilgrim. I would like to speak with Mr. Wart if it is quite convenient."

Coming from the bright daylight of the street, Marian could not see very distinctly, at first. The indistinctness, however, lasted for a moment only. Then her heart began to beat rapidly. Raymond's name rushed to her lips, but she did not speak it. In another instant her hand would have been in his. Raymond's attitude checked the recognition. Raymond's eyes greeted her at first without hesitation. The girl and the boy were again in the village on the cliffs. The next second his face was pale and he stammered:

"Oh! Mr. Wart, certainly; there is Mr. Wart. Mr. Wart, a lady wishes to see you." Marian's heart rebelled; but she moved towards the bookseller, who hobbled to meet her,

"Miss Pilgrim," said the old man courteously, "I am at your service. Will you permit an old cripple to resume his legs? I am helpless without my patient support. Raymond, bring Miss Pilgrim a chair; and your friend?"

"Don't trouble about me, thank you," said Ralph, who had been blind to much of what had occurred. "If you will allow me I will glance over these books."

Without a word, Raymond brought a chair as requested. "Thank you," Marian said softly, as she took the seat offered.

Raymond withdrew to the door of the store and stood there gazing vacantly into the street.

Was it disappointment? sadness? a little pain? that spoke in Marian's voice when she said to the bookseller:

"The object of my visit is this, Mr. Wart: I am about to get some new books for the school in Smeltham, and papa said this morning that instead of sending to London for them we should do better to come to you."

"I am afraid not," replied the bookseller, with uncommercial frankness, shaking his head sadly. "My trade, you see, is now so small and I am so poorly informed about the market, that I shouldn't be surprised if you could do even better than I can. I would scarcely know where to look for what you want. I have been locked up here so long and have paid so little attention to what is going on—perhaps..." the old man hesitated.

"Pray continue."

"I was going to say, but I am not sure that I ought to say it, that Raymond—Mr. Lee—might go to London and get what you want, if it would be of any service to you. Whatever the books cost—but, no," the old man started up, "we have no money. No, I can't do that: what am I saying? Miss Pilgrim," he added, petulantly, "I am sorry, but you see I am really not in the book business any longer. I have no time, no money. You can do so much better yourself." The old man lay back in his chair, his eyelids twitching nervously over his black eyes.

Marian was confused for a moment. "Perhaps Mr. Lee," she said, her heart beating rapidly, "can help us."

"Yes," said the old man, wearily, "Raymond will help

you if he can. He has attended to everything here for years, but I have no money—no time. Raymond, can you help Miss Pilgrim? Can you direct her?"

Raymond left his position by the door and came to the

back of the store.

"What did you say, Mr. Wart?"

"Miss Pilgrim, here, my new landlord's daughter, wants some books for her schools. Perhaps you know where she can get them?"

"What books are they?" asked Raymond, addressing the

old bookseller.

"Here is the list," said Marian.

Raymond took the piece of paper and read it hastily. Marian's brown eyes were watching him he knew, and it is scarcely a metaphor to say he felt her presence.

"I think I know who the publishers are of some of these. It would be easy, I'm sure, to get them all in London"

"Couldn't you get them for me? It would be a great assistance."

Raymond hesitated.

"We have no money, Raymond," said the bookseller in a slightly querulous tone. "No one will trust you. And the

expense of going to London!"

"Oh, I will pay the expense," interrupted Marian, "and as to the books, I will gladly pay for them also at once. We have already some of all of the books on the list, but not enough. A friend bought them for us in London and I don't want to trouble him again if I can avoid adoing so."

"Well, well," said the old man. "If Raymond will go to London I suppose he can do it; but I am afraid you will pay more than if you sent to London for them yourself."

"I think not," said Marian, cheerfully; "besides," she added, smiling, "papa says the people of Eastchester should buy what they want in Eastchester. You will get me those books, Mr. Lee?"

"Yes," said Raymond, keeping his eyes on the list, "if

Mr. Wart...."

"The most expensive of the books on that list I know cost four shillings. We will suppose they will all cost four

shillings, and I will send you the money when I get home. Will that do?"

"But that will be too much," said the bookseller.

"That is a good fault. You can return to me whatever there is over. How is Mrs. Finn and little Margaret? You remember they visited me once some time ago?"

"They are well," said the old man. "Quite well, thank you."

"Are they busy?"

"No. Raymond won't you call"

"Don't trouble to do that, Mr. Lee; if I may go to them..."

"Certainly," said the bookseller, anxious to be parted from his visitor; "Raymond, will you show Miss Pilgrim the way?"

Raymond conducted Marian to the kitchen and, without a word, returned to the store.

Mrs. Finn was still busy over the washing-tub and Mag was poking a very ashy fire with intent to urge a dilatory pot of water to boil.

"The fire's nearly out, Ma-Oh, here's Miss Pilgrim!"

"Law! Miss Prilgrim—get a seat Mag; not that, a clean one. It's good of you to come here," exclaimed Mrs. Finn, in a disturbed way. "You must excuse the looks of the place Miss—I...."

"Don't speak of it. You are busy I see. I came to see Mr. Wart, and I couldn't leave without seeing you and Margaret. Could I? I want Mr. Wart to get some books for me."

"Miss Pilgrim, it's no use," said the woman, changing her voice to a despondent key. "Isaac won't do it. He's hoarding that three hundred pounds like a miser, and he won't spend a shilling of it, no, not if it brought back a hundred. He's brought us almost to starvation, and I don't know what I should have done long ago but for Mr. Lee."

"Yes," said Marian softly. She added, "he is going to get the books for me. He has been with you a long time?"

"Let me see," said Mrs. Finn, drying her hands on a very damp apron, "it is seven years now since he came here. Isaac, you know, met him in London, in the streets I think. He found out he could read French or—what was it, Mag?"

"Greek," answered the girl.

"Yes, that's it, Greek, and brought him home here, and he's been with us ever since. Isaac could not do without him now. Really I don't think he could, Miss Pilgrim. There is something they're doing together."

"Yes, papa has spoken to me of Mr. Wart's book. Mr.

Wart is very anxious about it."

"He's lost to everything but it, Miss. He has forgotten us. He used to love Mag, but now he has scarcely a word for her. We should have starved or gone to the poor-house but for Mr. Lee."

"He has been kind to you?"

"If he'd been my own son he couldn't have been kinder. He's a thorough gentleman, Miss, too good for such as us; I mean me and Mag."

"Oh, no, I don't think anyone is too good for another, do

you?"

"He has had some trouble with his family, I don't know what. Isaac knows, but he won't speak about it. He says it ain't our business. Isaac has no faith in women. He says they're like the wind, they carry everything they can and the lighter a thing is the more they can do with it."

"He doesn't mean all he says."

"Isaac is mean enough with women. You don't know him, Miss."

"We mustn't forget his affliction."

"Ah, never fear, Miss, he doesn't let anyone forget it. All of us have to wait on him."

"I know you have had a hard time lately. My father was telling me about you this morning. But now, perhaps, you and I can put our heads together and make things better. Shall we try? and first of all we must get Margaret here to school, so that when she is a woman she will know something. Eh, dear?"

"Raymond's going to marry me when I'm growed." Mag

accompanied this speech with a little pout.

"Tush, child," said Mrs. Finn; "I'll box your ears if you talk such nonsense."

"Ray said so." The tears gathered in the child's eyes.

"It's just his nonsense," said the mother to Marian.

"Never mind, Margaret," said Marian, "a long promise often gets tired on the way, but if Raymond proves to be a false knight we'll find a—another one for you. Now, I must be leaving; Mr. Winter will be tired of waiting for me. I want you to come to see me to-morrow. You will bring her, won't you, Mrs. Finn?"

While Marian was visiting in the kitchen, Ralph was glancing in a very casual way at the bookseller's stock. Raymond had again taken a stand by the door. His feelings were as tumultuous as the sea which stretched before his mind's eye in the light of eight years ago. Old faces and scenes were rising before him. One form had suddenly stepped from the distance between him and them; could the others do likewise? The tide was again far out on the sands where the black rocks were, the sunset light was on the water, the little pools left behind by the tide in its retreat shivered under the evening breeze, and a voice sang in Raymond's thoughts:

The sunset died in the sky, heigh-ho! The darkness crept over the sea; And the wind arose with a tale of woe, And laid its burden on me, heigh-ho! And laid the burden on me.

"The past was buried," thought Raymond. "I had got even so far from it as to live fully in the present. Why am I called back to it? Am I to go through that old struggle again?"

"What is the price of this book?" asked Ralph, who at that moment was standing behind Raymond?"

"Oh!" cried Raymond, "I beg your pardon, I was thinking. What did you ask?"

Raymond's voice startled Ralph. It was so like the voice he had heard at the doorway of the cathedral.

"I asked what the price of this book was, but pardon me if I ask you now; was it you I spoke to one night a fortnight ago as you passed out of the north door of the cathedral?"

Raymond hesitated a moment.

"Yes, I was there. Was it you that was playing?"

"Yes," said Ralph, "when you sang."

Raymond was confused for a time, then he said:

"I hope you will pardon me. I took too great a liberty then. I hardly knew what I was doing."

"Oh, it was not a liberty," exclaimed Ralph earnestly. "It was a great confidence, one I understand perfectly—perfectly. I cannot tell you how glad I am that I have met you, for I want you to...."

At that moment Marian returned.

"Mr. Lee," she said, "there is the list of the books. I will send the check to you this afternoon. I hope I am not giving you too much trouble."

"No, indeed," sald Raymond, "it is no trouble."

Marian said "good-by," and departed with Ralph, who whispered to Raymond: "I will drop in to see you to-morrow"

Outside the store, Ralph's first words were:

"Do you know who that young man is?"

The question surprised Marian.

"Why-yes-" she stammered; "Mr. Lee."

"That is his name, I know; but I also have discovered something that will surprise you; it was he that sang in the cathedral the other night."

Marian had feared that Ralph's question was aimed in quite another direction.

"Oh!" she said, greatly relieved, "is that so?"

"You are very indifferent to the fact. I thought my news would astonish you, you were so anxious to meet the unknown the other night. You said you knew his nature from his voice."

"Did I? It was strange."

" How, strange?"

Marian did not reply.

Ralph perceived that she was preoccupied, and said no more.

When Marian arrived home she went upstairs into her father's library.

"You look fatigued, Marian," said Mr. Pilgrim, as his daughter seated herself and began to take off her gloves. "You are pale."

"Am I?" asked Marian, wearily. "I have a little headache."

"Did the old bookseller bore you to death?"

"No; he had little to say. Would you believe it, he fought hard against taking the order."

"He's a luny old fellow, Marian, I am afraid; but he is interesting, isn't he? Did he take the order?"

"No; not exactly." (Pause—the glove on the left hand was very disinclined to yield its position.) "Do you know who is with him, papa?"

"No, dear; who?"

"I want you to promise me that you won't recognize him unless he makes it plain that he wants you to."

"Who is this Sir Incognito?"

" Promise."

"Of course."

"Raymond Lee."

The obstinate glove was off, but it greatly needed stretching, and Marian was very busy with it.

"Well, well!" exclaimed Mr. Pilgrim, "what is he doing with old Wart?"

"He helps him in the shop and with his writing."

Pilgrim exclaimed again, but in a different tone:

"Well! I suppose he's...how many....why it's seven years ago since we were thrown on that Lee shore. I had almost fogotten him."

"Oh, papa!"

"Well, you know what I mean, dear, I haven't thought of him for some time. But why do you desire that I shouldn't recognize him?"

"I don't think he wants us to."

"Did you speak to him?"

"Yes; as a stranger. I could see he knew me, but he treated me as though we had never met."

A little disappointment was audible in Marian's voice.

"Well, what do you care?"

"Care!" Marian re-echoed the word, and arose and went toward the door.

"Where are you going, Marian? You haven't told me all."

"By and by, papa," she answered softly, "I have a headache."

She stooped and kissed her father and left the room.

Pilgrim again exclaimed, "Well!" in still another tone of voice, and after a moment resumed his reading.

CHAPTER XII.

MARIAN'S DREAM.

LD TOM," of Eastchester, tolled slowly and solemnly as befits a sentinel of Time crying to Eternity. Another hour had crept up stealthily to his post in the cathedral tower and escaped, laden, who can tell with how much, filched from human hearts and hands?

"Dear me," exclaimed Mr. Wart, arousing himself from a dog-doze in a corner of the front part of the store, "is that five o'clock?"

"Yes," answered Raymond; "five o'clock."

The twilight of the short December day had nearly given place to night, and the bookseller's store was illuminated only by the glow and the flicker of the grate fire.

"What are you two doing?" asked the old man, rubbing

his eyes and peering through the darkness.

Raymond and Mag were busy in the rear room of the store, setting a table for a meal.

"Oh! Mag and I are going to have a visitor to-night," replied Raymond, laughing. "Ain't we Mag. No, no, don't put that plate there; already there are too many on that side; give it to me. Now, go and get the knives and forks."

Raymond's answer had not enlightened the bookseller. After a minute, he asked again:

"What are you about, Raymond?"

"I'm getting things ready for tea; Ralph's coming to see us this evening. I want you to know one another."

"I do know him, Raymond," said the old man with emphasis, "though," he added in a quizzical way, "of course not so well as you do. He has had so much of your time for the last three months you must be firm friends by this."

Raymond was still busy at the table.

"Yes, we are," he replied. "I hope so."

"Any doubt?"

"No-o, I think not."

"Be sure of a friend, Raymond."

"Don't fear; if there is any doubt it is concerning my-self."

For a while nothing more was said; then the old man spoke.

"What do you find to do together, night after night?"

"Play and sing and smoke."

"He lives with the Carrols, you say?"

"Yes, he has rooms there at the top of the house; he has furnished them to suit himself and has settled down, he says."

For some reason the dwarf was unusually inquisitive; as a rule he didn't pay the slightest heed to anybody's personal affairs.

"Settled down, eh! I understand his home is in America. What does he find to do over here?"

"Didn't you know that he is helping Miss Pilgrim in her schools? He has become her right-hand man."

"In hope of becoming her left-hand man, eh?" asked the bookseller, smiling.

"What do you mean?"

"The left hand is the marriage hand, Raymond."

The old man chuckled.

"Oh! I see what you mean." The tone of Raymond's voice changed. "Yes; Ralph hopes to marry her."

"Ah! If he has taken you into his confidence about that affair you must be close friends."

"Yes;" answered Raymond vaguely.

"And the young lady? What does she think of your friend? Both have money. I suppose they would make the modern 'safety match,' eh, Raymond; 'good match?'"

The bookseller laughed again at himself.

"Oh—yes; excellent. Why doesn't Mag come with those knives?"

Raymond opened the door and called:

"How much longer, Mag?"

A shrill voice came from the rear of the building:

"You've got to wait till the knives are cleaned. Ma's doing them now."

"All right; no hurry."

Raymond closed the door and sat down by the fire.

The bookseller watched him intently from his dark corner. The old man's thoughts evidently were still traveling along the same road, for after a while he asked:

"Raymond, have you ever spoken to Miss Pilgrim about —er—why you are here?"

"Not a word."

Raymond was gazing at the fire.

"But she remembers you, surely?"

"Yes; I think so."

"Has she never referred to your former acquaintance-ship?"

"No; never."

"Must not she think it very strange that you see her so often and yet say nothing?"

"I can't tell what she thinks. I wish I hadn't met her again."

"Why, Raymond; why?"

"Oh, it's all so useless. Dear me, I wish Mag would hurry. We shall be late."

"Useless," repeated the old man. "Come to me, Raymond; what is the matter?"—The dwarf's voice became as tender as a woman's—"You know you are my boy; the only gift I have left for you, Raymond, from the wreck of my life is advice, such as it is. Trust me. Is there anything troubling you?"

"No; nothing; nothing at all. Why?"

"You have been in a mental fever, my boy, for—well, the last month. There is a strain somewhere; it has got into your laugh. Raymond, you know you can't deceive the old man."

"I am not trying to deceive you."

"True, true; only passively, Raymond; you are hiding something. No, don't say a word for a minute, let me speak. There; I have no right to question. You are a man; let me see how old, twenty-five, isn't it? But to me, whose life is all behind him, you are a boy; doubly so, Raymond, because the sweet light of childhood burns late with you, and you know-ah, you can't know!-how that light has been to my old, dark soul, God's one great blessing. I love you, Raymond (the old man folded the younger one in his arms) as Saul might have loved David, because he brought to him the beauty of the fields and the freshness of life, and better than all a new light on the horizon. Do you wonder if I am curious when I see something strange creeping into your life? I fear any change. I will tell you what I have thought:"-the old man fixed his eyes on Raymond's—"Can it be that—Miss Pilgrim....?"

There was no need for further words.

"Yes," cried Raymond. "Hush; I love her. I wish I didn't. I'm a fool...."

"Here are the knives," cried a little voice.

"What, all cleaned," said Raymond. "Well; we must hurry or the table never will be set; will it, Mag?"

Mag did not reply.

The preparations, however, were all completed long before Ralph arrived. The fire glowed and sent the flames dancing up the chimney as though it expected company; indeed, no greater mistake can be made than to regard a fire (the free, open fire I mean, not the miserable substitute caged up in the cast-iron stove) as inanimate. No one who has once begun to discover all its moods or feel all the warmth of its poetry, or who has been under the spell of its playful fancies and sparkling humors, or accepted its endless invitations for reverie and meditation, or commenced to explore the wondrous hills and vaileys of its glowland, or track its ever-changing phantasies, would make any such mistake. That evening, the fire in Mr. Wart's parlor divined more than Raymond knew, and if the young man had not been so blind he would have perceived that it possessed a secret, from the exuberant way in which it sparkled on every bright spot on the tin kettle, forcing the usually very self-contained old fellow on the hob to purr till his sides shook. Besides, it tickled the plates which Raymond had put in the fender to get warm, until they laughed and were brighter than Dresden china; it weaved a glow into the common tablecloth, finer than the patterns in the finest damask; it gilded the pewter forks and drew fantastic designs upon the faded antique paper on the walls, quite beyond the fancy of any draughtsman. It even drew old Mr. Wart out of his corner. The dwarf wheeled himself into its warmth and light.

"Ha, ha," said the old man, rubbing his long, white fingers, "this looks cosy, Raymond; tea, muffins, eggs..."

The store bell jangled. Raymond jumped up from his reverie and his face brightened.

"Well, Ralph," he cried, hastening into the dark, front part of the store, "I thought you weren't coming."

"Ray, I felt this honor was more than I was entitled to alone, so Miss Pilgrim kindly consented to help me out."

The fire, who, beyond doubt, had expected the unexpected visitor, lit up Marian's face and the brightness in her eyes as she came forward and offered Raymond her hand.

"Mr. Lee, I hope you won't build too much on any statement that bears on Mr. Winter's modesty. The truth is, I have promised Mrs. Finn several times to come to take tea, and when Mr. Winter told me that you were going to be chief cook to-night, curiosity was too strong, and I insisted that he should take me with him. I told him I was sure I could make my apologies to you."

There was a slight tone of audacity in this speech; something of a happy air of confidence which touched Raymond, and compelled him to sympathize with it.

"I am all the more pleased," he said, laughing, "if Ralph has got nothing to do with this visit. So, I am sure, are Mrs. Finn and Mr. Wart."

At the mention of his name, the old bookseller advanced a little in his wheel-chair.

"Miss Pilgrim," he said, "I wish we could tempt you here like this more frequently. Your visits usually are like the angel's, always unawares, when we are in need. Light the

lamp, Raymond. Miss Pilgrim and Mr. Winter, won't you make yourselves as comfortable as you can?"

The dwarf evidently was beginning to fall under the spell which the fire had been keeping. The old man's humor brightened, and he climbed out of his chair and hobbled about the room with an alacrity he seldom displayed.

"Let me take your hat and jacket, Miss Pilgrim. I am the only old rat here that knows the safe corners for things."

"Please, Mr. Wart, won't you let me have my way this evening?" asked Marian, with mock seriousness.

"My dear young lady," said the dwarf, laying his hand on his heart, "I will personally guarantee that everyone here shall be bound to you as a slave. If I see the slightest disobedience, I swear I will become an ogre."

"Well," said Marian, "I want you to allow me to look after myself just as though I was at home, and (turning suddenly towards Raymond) I want to toast those muffins."

"If I'm to be chef," said Raymond, laughing, "I must not be interfered with."

"Obey, Sir," cried the dwarf, feigning fierceness. "Not a word."

"I want to be only an assistant to your highness," pleaded Marian, addressing Raymond. "I will be obedient."

A delicate ear would have detected something of tenderness in the latter sentence.

Marian put her hat and cloak aside on a stack of old books and seated herself on a low stool before the fire.

"Now, Mr. Chef, if you are ready give me the fork and let me begin, for there are two, four, six, twelve to be done, and I know we are all hungry."

While Raymond made the tea and boiled the eggs, Marian toasted the muffins. She impressed Ralph into the service of getting the meal ready and kept him busy handing her "the butter" and "another plate" and "the butter again." Ralph had never seen her so vivacious before. Her face was bright with pleasure, and when the fire had deepened her color, as though the sorcerer had made her

blush by telling her secrets, Ralph was struck with the subtle heightening of her beauty. Was it the wondrous light of Love that glowed in the sweet face of the little nun of East-chester—the light of the human annunciation, the divine accession to our common nature?

Mrs. Finn, who had been busy straining the resources of her wardrobe in honor of her visitors, joined the party, very red, very nervous.

"And Mag; where is Mag?" asked Marian, after greeting

the worthy matron.

"She is in the kitchen; I can't get her to come. She's sulky about something, and as obstinate as a little mule. I told her I'd give her a good wippin' if she doesn't change her mind and come in very soon."

"Oh, I'll go and fetch her," said Raymond.

"No; let me, please; I know the way," cried Marian, hurrying into the hallway.

She found Mag crying quietly in the kitchen with her head on the table, under the dim light of a tallow candle.

Marian put her cheek against the girl's face and whispered kindly:

"Why, what's the matter, dear? come."

The child threw her arms wildly around Marian's neck and burst into a paroxysm of sobs.

"Oh, he loves you; I heard him tell uncle he did. Oh, oh," she cried.

"Why, child, what are you saying?"

"Oh, Miss Pilgrim, Ray lo-oves you; he said so-o this afternoon."

Marian's arms suddenly tightened so firmly around the child and Marian's lips pressed so hard against her forehead that Mag was so astonished that she ceased crying and regarded Marian in wonderment. Marian's face was pallid. After a minute she said, in a broken voice:

"Mag, dear, I want you to promise me that you will not say to any one what you have just said to me."

"Ye-es," Mag replied, alarmed at her elder's serious tone.

"It would pain me very much if I should find you had told anyone. You will surely keep your promise? Kiss me and say yes."

"Yes, Miss Pilgrim," said Mag, the tears rebelling again. "I like you, you are so kind."

"There, there, don't cry; you shall come and stay with me for a little while and we will go to London together in a week or two. Now, come, let us go in and have tea. Sit beside me at the table. Dry those eyes, they are as big as buttons."

Mag smiled. The new prospect pleased her.

"Well," exclaimed Ralph, as the two entered the store, "we were just going to send to find out if our little friend here had perverted you."

"She is a bad girl," Mrs. Finn said bitterly, scowling at Mag.

"No, Mrs. Finn, she is not," said Marian, in a conciliatory tone. "Mag and I were telling one another a secret, and we couldn't come any sooner."

I know nothing of the long history of the building which old Mr. Wart inhabited, but I feel sure a pleasanter meal had never been eaten in it than the one that evening. The dwarf, so long restrained by the repression of poverty, expanded at the touch of sociability. It recalled happy times in the past, and put out of sight for the moment his straitened condition. A dignity and courtliness of manner which had been hidden for years, like the remnants of an old finery, revealed themselves, particularly in the dwarf's attitude towards Marian.

"It is seldom, indeed," he said, "that the princess visits us. I wish we could do something to cause her to remember it."

"Don't fear, Mr. Wart, the princess will never forget it."

There are moments when one's nature is like a light that throws a radiance around the person. It was so with Marian that evening. Her quiet exhilaration imposed itself upon the others. The dwarf watched her keenly. "The princess is in love," said he, mentally, "the rose is unfolding itself to the sun. No wonder you are disappointed, Raymond, that girl will not love, but worship."

Ralph was noisy and happy. He was glad to see Marian enjoying herself. He told stories about his college days

and his life at home in America. Though Raymond was quieter, he was not less happy, and when the conversation turned, as it did after a while, in a serious direction, he begged the dwarf to give Ralph and Miss Pilgrim an account of the work he was doing and the hopes he entertained. On that subject the old man was a rhapsodist. Marian listened with interest that deepened as the bookseller unfolded his dream. The story had something like music for her feelings at that moment.

"And," said the old man, affectionately, as he concluded, laying his hand on Raymond's head, "here is my light and my hope."

Raymond dissented. For a moment all were too moved to speak. After a while Marian said quietly:

"That is beautiful, Mr. Wart, only I wish it were not so remote from what is to-day; and don't you think you should make some place in your plan for that other side of beauty which is Christ's?"

"Ah," said the old man, significantly, "I have much to say on that score. That has not been overlooked though it has been omitted. Some day, if the princess is interested, I will talk the matter over with her."

When Marian and Ralph started for home the dwarf and Raymond waved good-by to them from the steps in front of the store. The heavens were flooded with moonlight, the quiet streets and the cathedral were silvered, the stars burnt like diamonds in the still, clear, winter sky, and something in harmony with the vastness, the peace, the beauty of Nature was in Marian's soul.

"Ah," said the dwarf, as he entered the store with Raymond, and closed the door. "I don't wonder you love that girl. The man who gains her will win something more than the kingdom of Love itself. She has the genius of affection, and mark, northern as it is in some respects, her love is oriental in its softness, color and warmth. Love will paganize her christianity."

"Nonsense," said Raymond, whom the old man's words made uncomfortable.

"Trust an old man's opinion," said the dwarf. "I will give you two texts descriptive of our princess's love; one

you know well: 'Entreat me not to leave thee or to return from following after thee, for whither thou goest I will go and where thou lodgest I will lodge, thy people shall be my people and thy God my God.'"

"That is not pagan," said Raymond.

"It is," said the old man, emphatically, "although it is in the Bible. However, about the second there can be no doubt; it is from Euripides' Andromache. Do you remember where Andromache cries: 'Ah, my dear Lord Hector, for thy sake would I even forgive my rival if ever Cypris led thee astray, and often in the old days have I held thy bastard babes to my breast to spare thee pain."

"That is pagan." said Raymond, smiling faintly; "but I don't think you know Marian."

To be continued.



Rensselaer. With illustrations by Joseph Pennell. New York: The Century Co. 1802.

Advanced Building Construction. A manuel for students. By the author of "Notes on Building Construction." London and New York: Longmans, Green & Co. 1892.

Mrs. Van Rensselaer's papers on the "English Cathedrals" are familiar enough to the readers of the Century. For some time past they have been among the principal contributions to that excellent magazine. Advanced in this way for consideration as ephemeral contributions they were satisfactory, if not sufficient. They were "popular" enough in tone and matter to interest the great multitude of the incipiently cultured who shrink from an acquaintance with knowledge in her severer moods, and yet they possessed sufficient charm, fullness of reach and substantive value to be entertaining reading to the professional man. The papers, however, were not of the kind that by any mere revision, correction, exclusion or binding could be lifted above the plane of good magazine work. In other words, they lack the solid value that would rightfully entitle them to a permanent place in the library. From this the reader will infer that the book can be of little real service to the architect or the architectural student, and, indeed, obviously it was not written for either. We doubt very much whether the publishers would have made this second appeal to the public, but for the illustrations which Mr. Pennell has interpolated into the text, and for the new fashion that has lately reached alarming dimensions of presenting books to one's friends at Christmas time, of value only for the extrinsic qualities of fine paper and showy binding. Of Mr. Pennell's drawings there is little to be said but praise-save from the architect's point of view. To the latter, Mr. Pennell's illustrations are valueless as media of information. In them the architecture is (if we may say so) de-architecturalized as much as possible and merged into the picture as part of a landscape. But to all this it it to be. Both have very successfully accomwork well. The information she gives is accu- "advanced" student to do that.

English Cathedrals. By Mrs. Schuyler Van rate, and she is not so burdened with it that it is presented without charm or ease. The only exception we would make to this is in the frequent comparisons she has felt constrained to make between English Gothic and French Gothic. She seems to be afraid that the reader may go too far in his admiration for English work. She reminds him continually that there is better to be found in France; that French Gothic is far more logical on the constructive side. In all this there is an air of a newly-learned lesson, and if we mistake not the author's teacher was Mr. Charles Herbert Moore.

"Advanced Building Construction" is an abridgment of Part II. of "Notes on Building Construction," the well-known work arranged to meet the requirements of the Syllabus of the Science and Art Department of the Committee of Council on Education, South Kensington. It is a book for students who have advanced slightly beyond the first elementary stage. To such it supplies a wide range of information in the form of succinct notes, with illustrations of nearly everything that can be illustrated to any real purpose. The fault we find with the book is that it lacks constructive progression. It offers the learner a great many facts, much valuable information, but it lacks the vivifying touch of a synthetical principle. To a good treatise on building it holds the same relation that a dictionary of architectural terms does to a work on architecture. Indeed, it really is a dictionary of building processes, materials and devices arranged under general headings instead of in alphabetical order. The information is not always very profound as may be instanced in this definition or description of tin: "Tin is used for lining lead pipes and for small gas tubing. It is very soft, weak and malleable, and more easily fusible than any other metal." This is not very comprehensive nor very enlightening; indeed, as a description of an important and much-employed metal in the building trades it is "very soft, weak and malleable and more easily fusible than any other" description we have yet met with in a book may be objected, with justice, that it is not fair intended for "advanced" students. The work, to find fault with a book for not being something of course, adheres to British practice, which may other than what author and illustrator intended be and no doubt is adequate to British conditions. Different conditions prevail in the United States, plished what they set out to perform, and if we and in many particulars our practice differs are asked to receive their work a second time in greatly from that of our cousins. Consea more serious guise than when it first appeared, quently, this book needs to be read with reference it is better to pay small heed to the request than to American practice, and corrected or amended to criticise. With the qualifications indicated in where the practice of the two countries differs. It the foregoing, Mrs. Van Rensselaer has done her is asking a little too much to require even the

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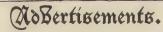
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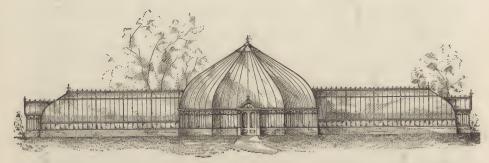




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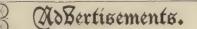


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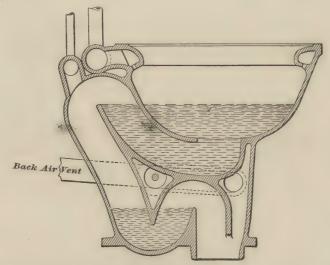


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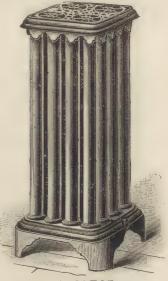
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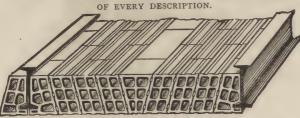
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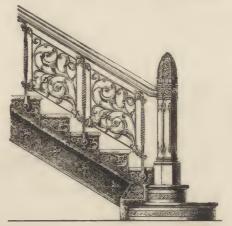




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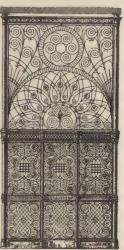
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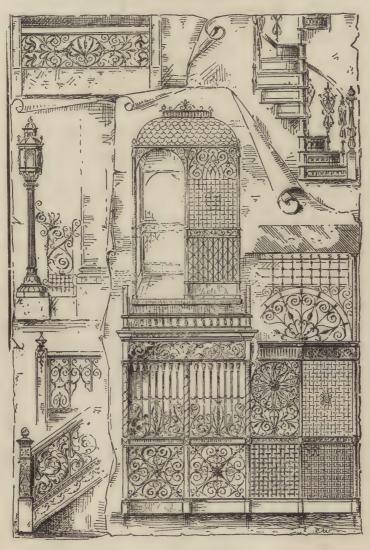


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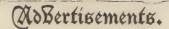
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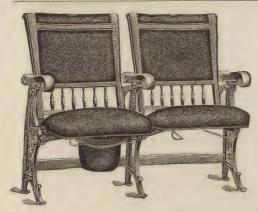
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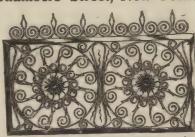
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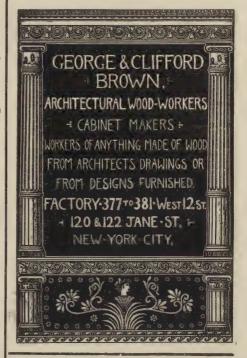
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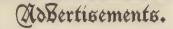
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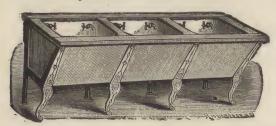
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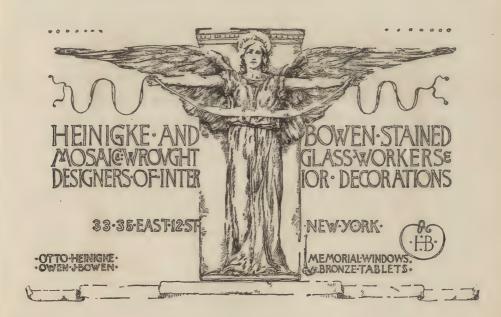


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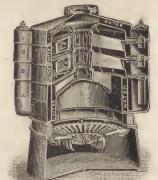


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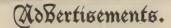
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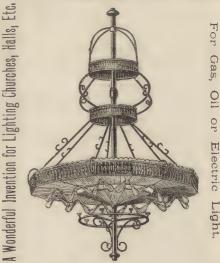
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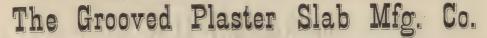


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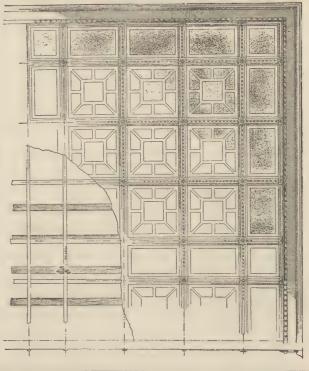
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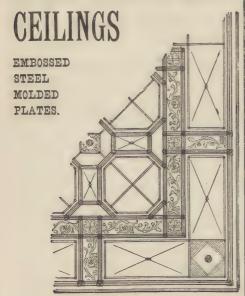
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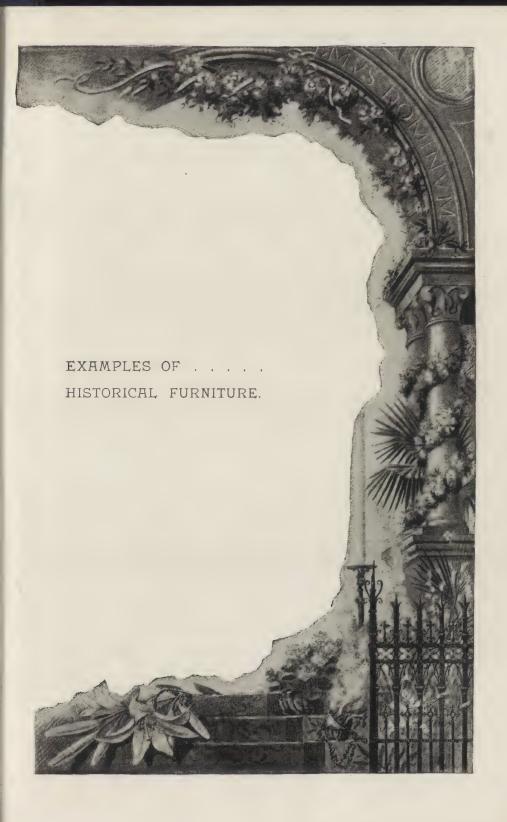
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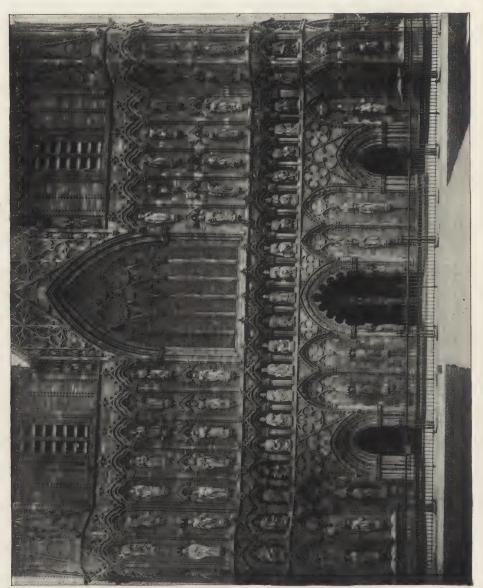
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Architectural Record.

VOL. II.

APRIL-JUNE, 1893.

No. 4.

ARE CONVENTIONAL PATTERNS SPONTANEOUSLY GENERATED? *



has to deal, but first and foremost he is plications of it to the lotus and to classic obliged to say what are the conven- ornament mainly are; but we shall see tional patterns of tradition, and to that as far as anthropology has gone critics of the "Grammar of the Lotus" that there are no patterns of tradition. would soon lose all resemblance to the tries to invent ornament.... Most of mony of line and color. This, then, these simple elements are found in the was the origin of decorative art. ornament of every savage tribe that I have a very dear and learned friend

N the pattern ornament of has attained a little skill." It is indeed the nineteenth century we natural to suppose that the simpler a may distinguish three pattern is, the more easily it is invented. classes of designs—first, The only sophism about this natural the pattern which repeats supposition is that the simple patterns a more or less realistic pic- have never been invented. ture; second, the patterns have always been inherited. designed under the con- was their original starting point before ventionalizing methods of the Decora- they became simple. As patterns they tive Art movement; third, the conven- represent a habit, not an invention. tional patterns of tradition. It is with This is my assertion. The thesis as these last that the student of the lotus such is not a new one, although my approve that they are traditional. For it in studying savage ornament, it has appears that the elementary knowledge already worked largely on this assumpof some people is the fundamental tion. According to the "Primer of ignorance of others, and we have prac- Art," by John Collier (Macmillan): tically heard the assertion from some "Any natural object could give the starting point for a pattern which According to the Nation, for instance: thing it originally represented." The "There is a considerable number of picture was reproduced "without reforms so obvious and inevitable that it gard to the original until the picture would be a wonder if they were not became conventionalized into a patnearly universal....certain ones are tern, which pattern, once freed from practically universal, and are rein- the trammels of nature, developed itvented every time an untaught person self according to man's sense of har-

^{*}Being the second Paper of a series on the evolution of classic ornament from the Egyptian lotus. See "The Grammar of the Lotus—an Answer to Critics," in October (1802) Number.

volute.



Palæolithic drawing on bone.—Bison's Head.

life-like pictures of the mammoth and

who objected to my theory of concen- accessible and obvious instances in textric rings, that he used to make them tile fabrics and on wall papers. None on a barn when he was a boy, with a of these pictorial patterns have a wide pair of dividers. The odd thing is that diffusion or a distinct hold on public concentric rings are not found in the taste. Their weakness, as far as surart of nations which have been best ac-vival is concerned, lies in their multi-quainted with dividers. They have not plicity and in the demand of fashion been used in Europe as an ornamental and of trade for a novelty. Another system since the time of the prehis- weakness is the constant initiation of toric bronze culture, and they are there more and more people into the point of distinctly derived from concentric rings view, which is a matter of course to the joined by tangents, which represented educated decorative designer, that the spirals. They were not invented, they more pictorial a decorative design, were evolved. As for the spiral itself, the less it is fitted for good decorative we will consider that later, and its probresults and purposes. Since the days lem is the same as that of the Ionic of Owen Jones and his "Grammar of Ornament" the theory and practice of The fact is that modern criticism has conventional ornament have triumphed its own prejudices and its own narrow- wherever thought and culture have ness. It is very loud in its announce- made their way. This was a grand rement of the evolution theory, but it is action for good as against the feeble very illogical in supposing that there has pictorial ornament of the first half of been no evolution in the field of orna- our century, but Owen Jones omitted ment. I shall try to show in this paper to teach his pupils of the Decorative that it is in blunt contradiction with the Art Revival one thing, viz.: how the researches of its own anthropologists conventional style of design, which he when it asserts that geometric orna- so rightly admired in historic art, had ment is the initial starting point of actually developed in historic use. primitive man. According to the Critic, With our own time conventional art is "Given the tools and an instinct for a theory taught by Owen Jones. In decoration, geometrical ornament will historic art it was a result reached by spontaneously follow"—but when we evolution. Since his "Grammar of examine history we find that the earliest Ornament" (1856) we have undoubtedly ornaments of primitive man were very invented a good deal of geometric pattern or highly schematic pattern on theory. We have even taught such. invention and the practice of such invention in elementary schools and kindergartens. But do not, oh, man of to-day, be so wise as to imagine that primitive man is taught in a kindergarten. His only kindergarten is the fetich.

Now there are, in our own practice, other animals, the drawings on bone a vast number of intermediate stages and horn of the Palæolithic Epoch. For between the purely pictorial patterns of the moment let us remember where we untrained modern art and the convenobtained our own theory of conventional patterns of the modern educated tional art, how long we have had it, and decorator; but when we turn to those how very apt we are to transplant the patterns which are distinctly characterhabits of thought created by it to the istic of the recent period of theoretic art of other days, without authority invention, it will also be found to hold and without reason. I was speaking of of them that they have no lasting the three classes of patterns in modern future. It will hold also of them that use with reference to this very point. they are too numerous to last, and it Of the pictorial patterns just specimay be added that they have not the fied we may find the most numerous, strength to cope in popular general usage with the patterns of tradition. course, and certainly not a case which The strength of these last is the will justify its advocate in patronizing strength of tradition, of wide decora- an opponent. tive availability and constant use, and above all of the limited number and simplicity of their elementary motives. A still more important element of strength is inherent in their architectural use and in the ascendant power of architectural art over all minor arts of decoration. These traditional patterns are consequently dominant in terra cotta, in tiles, in iron and metal work, and in wood carving, and are copied in color, in fresco and in stamped designs. Moreover these conventional traditional patterns have received a new impulse, and have gained fresh strength from the Decorative Art Revival. As found in the "Grammar of Ornament," and in the similar works of Racinet and others, they have been copied by modern decorative artists searching for a ready-made motive, from the historic plate illustrations of Egyptian, Assyrian, Greek, Arab and Renaissance art. There is no doubt that the plates of these illustrated works have had a much more powerful influence in promoting the spread of the old conventional patterns than their theories have had in furthering the invention of new ones.

It is the limitation in number, the simplicity and the wide-spread modern use of these conventional traditional patterns that has caused the belief that some of them are spontaneously generated whenever and wherever an ornament is wanted. That they are found both in ancient and modern art at remote distances, in various quarters of the world, and at points which appear to us to have been inaccessible to one another is undoubtedly true. That they are universal is not true; that they are common or elementary or indigenous forms in primitive art is not true. That they have ever been spontaneously generated in Europe is positively untrue. I shall show what amount of historic continuity can be proven for them, and when this has been done I think that the advocates of the spontaneous generation theory will admit that its case is very much in suspense, not by any means a matter of

H

I do not think it has been suggested that the Ionic capital, the "honeysuckle," or the egg-and dart moulding have ever been spontaneously generated, but it is the prevailing view that



Evolution of the Guilloche. The two later stages are found on Cypriote vases.

the meander, the various forms of spiral ornament, the guilloche, and the rosette, are "reinvented every time an untaught person tries to invent ornament," and that "they are found in the ornament of every savage tribe that has attained a little skill."* But all seven motives named, and some few other motives, belong to one ornamental system, and have never been used in Europe, apart from historic connections with their original system, since the Greeks, and have never been used in Europe since prehistoric ages, without distinct dependence on the Greeks. As found with the Greeks they can all be traced back to Egyptian sources; except the guilloche, which is only a later variant of the spiral scroll.

I will not stop now to debate the origin of any of these forms and I will waive the egg-and-dart moulding, as regards even its mention in the Egyp-

^{*} See quotations from the "Nation" in my first article.

[†]The guilloche pattern has been found in Egypt on pottery dated to the Twelfth Dynasty (3000 B.C.), which was probably.made by foreigners resident in the country, but it may easily be an Egyptian pattern which has not yet been specified as such, for want of sufficient evidence in the way of finds.



Head of the Lady Nefert, portrait statue of the Gizeh Museum. On the head-band are rosettes between lotuses, dating about 4000 B. C. Neck ornament of lotus buds inverted.



Enamel rosette amulet; Owens College, Man-chester. Dating about 3000 B. C.



Scarab with spiral scroll. Fifth Dynasty (3900 B C.)



Meanders from a tomb at Siout; about 2500 B. C.



tian category, if any one should desire me to do so, as its motive is only found in Egypt in the form of a flat lotus border inverted. But still let us stop a moment to consider this point of historic continuity for the named, ornaments The Egyptian block. rosette can be dated to the Fourth Dynasty, 4000 B. C. Since that time its history has been contin-Since its transmission to Europe it has never been reinvented in Europe, for there was never an occasion or a chance to reinvent it there. The spiral scroll is dated to the Fifth Dynasty.* That

too has had a continuous history since that time down to the nineteenth century, as far as Europe is concerned.

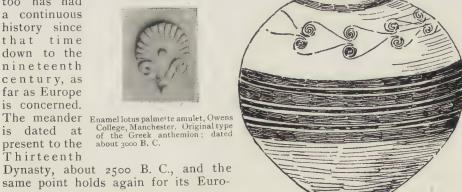
Thirteenth

Dynasty, about 2500 B. C., and the same point holds again for its Euro-



Granite pillars at Karnak. On one of them the Ionic lotus in relief; about 1600 B. C





Spiral scrolls on pottery. From the "First Mycenæ. Schliemann excavations. From the "First Tomb,"

^{*} References and authorities for all dates will be found in the "Grammar of the Lotus," by referring to its index.

pean history after that date. The Egyptian Ionic capital is dated to the Eighteenth Dynasty, 1600 B. C. The Egyptian anthemion ("honeysuckle" original) is dated to the Twelfth Dynasty (about 3000 B. C.) In the various cases mentioned the dates are for the earliest known cases among the very rare instances of positively dated ornaments for very early times, and a considerably higher antiquity than the given date must be assumed in all cases. The lotus border originals of the egg-and-dart moulding are certainly much older than the Eighteenth Dynasty to which we can positively date them.

Some of these ornaments traveled all over Europe in the prehistoric period. None of them, however, appeared in Europe before the Age of Bronze, and they moved with the arts of metal

partly by land, partly by Phenician commerce, from the South and Southeast to the North and Northwest. From the days of the Greeks downward the history of all these forms and patterns is continuous in Europe. In the Mid-



Tombstone anthemion, Athens.



Prehistoric Swedish bronze axe, with spiral ornament.

dle Age, when classic art was nomin- verified for all periods of the Middle ally or apparently abandoned, the sur- Age. The Ionic capital survived till face patterns at least are historically the twelfth century at least. The eggcontinuous. The anthemion can be and-dart moulding can be verified for



Roman anthemion, alternating with remote lotus derivatives. The lower border is a variant of the leaf and dart moulding, with alternated lotus trefoils. Lateran Museum.



Detail of the bronze chandelier at Hildesheim. Anthemions and spiral scrolls of the XIth century.





Ionic capitals at Caen, close of the XIth century.

rosette was never given up. The spiral without reference to this revival. scrolls are historically continuous and It is not long between the last days the Egyptian lotus trefoil (fleur de lys) of classic art in Southern France and

Greco-Roman motives were all revived, sance to the nineteenth century all these

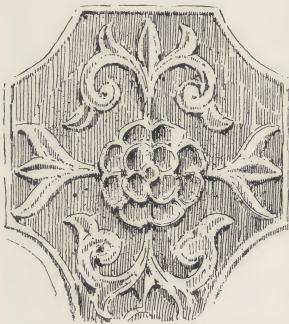
the twelfth century at Arles. The and many of them had survived is a conspicuous instance of continuity. the first days of the Italian Revival With the Renaissance period the in Pisa. From the time of the Renais-

motives have been strictly traditional. They have been carried along by the great waves of civilization which have moved from the Renaissance, from the Greek Revival, and from the recent studies of historic art. Their continuity is a phase of the one essential fact of the history of civilization, that man never reinvents anything that he finds ready-made to hand. They met all the natural demands for ornamental patterns. They were passed on, from one decorator and artisan to another, as the matter of course things to do.

Now I urge that the history of ornament in Europe establishes a preliminary presumption that these ornaments when found elsewhere may not have been created

> independently or spontaneously, and outside the American Continent we have not the slightest difficulty in proving a positive

> I will now take up successively the patterns for which the



Saracenic lotus trefoils, derived from Byzantine. Algeria.



Fifteenth century Italian lotus trefoils and anthemions, derived from classic models.

claim has been especially made that they "are reinvented every time an untaught person tries to invent ornament." It may be well to mention the Ethnographic Collections on which I base the following statements. They are the New York Natural History Museum, the National Museum at Washington, the South Kensington Museum, the British Museum, 'the Pitt-Rivers Museum at Oxford, the Trocodéro in Paris, the Kircher Museum at Rome, the Ethnographic Museum of Amsterdam, the Ethnographic Museum of Berlin and the Ethnographic Museum Levden. The two last named are the finest collections in the world, and I have made

Notwithstanding the enormous num- are much more comprehensive and sys-



Buddhist gold relic casket, Greek style, dated 50 B. C. From the Valley of the Cabul. "The bottom of the casket is ornamented with a beautiful conventional representation of the sacred lotus.

a careful study of their evidence, hav- ber of objects from the Pacific Islands ing examined thousands on thousands in Berlin and in London, the Leyden of objects to reach my conclusions. Collections must be placed first. They

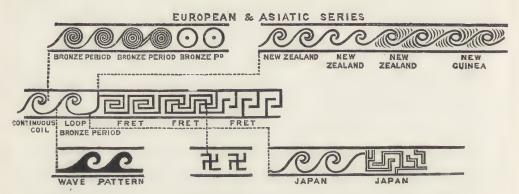
> tematic as regards a balanced choice of objects for all local centres, for the Pacific Islands in general, and above all they are connected with a representative exhibit for the Ma-Archipelago lay which is simply unique.*

When these various Ethnographic Collections have been examined it appears that the conclusions obtained for Europe regarding the meander are substan-So far tiated. from being a universally employed



Silver patera; Greek style, Bacchic subject. From Badakshan.

^{*} Owing to the facilities offered through the Dutch Colonies of the East In-

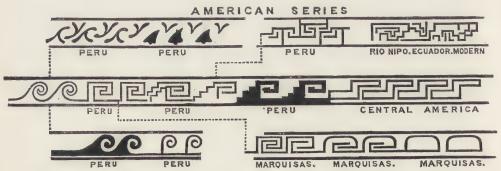


Variants of the spiral scroll and meander, according to General Pitt-Rivers. From John Collier, Primer of Art.

Bactria founded by the successors of stances. commerce then actively carried on were found in with the West. These same Buddhist influences by way of farther India would explain its occasional appearance in the decoration of the Malay Archipelago, where it is by no means common. The meander is so rare in Polynesia that the Leyden Collection contains

or spontaneously generated pattern it is only two examples * and I have not obdistinctly traditional outside of Europe, served a single other Polynesian inas far as we can trace its history. It is stance in the magnificent collections of unknown to barbaric Africa;* it was not London and Berlin. In the same exused in ancient Mesopotamia. It is hibition case, with the instances of the foreign to Mohammedan and Arab art. meander from the Marquisas Islands, I Its sporadic appearance in Asia, India, noticed a necklace made of common Thibet, China and Japan, is due to shirt buttons. This palpable indication Buddhist influences. The Buddhist art of European influence might account is the earliest that we know in India also for the meander, and although I (third century B. C.), and at its first am not disposed to insist on the appearance is saturated with Greek coincidence there are agnostic minds influences through the Greek states of which would - under other circum-For instance, if supposed Alexander the Great and through the cases of ancient Northman ornament Massachusetts with necklaces of shirt buttons, I think it would be hard to convince the agnostic

^{*} On ivory ear ornaments from the Marquisas Islands. The meander is also quoted for the Marquisas Islands by General Pitt-Rivers, founder of the Oxford Collections known by his name. I have not found it in Partington's publication of Polynesian ornament. As influences from the Malay Archipelago are conceded for the whole of Polynesia, a sporadic appearance has nothing sur-prising about it. The meander is distinctly foreign to the ornamental systems of Polynesia as such.



Variants of the spiral scroll and meander, according to General Pitt-Rivers. From John Collier, Primer of Art.

^{*} I have notes for one or two sporadic cases.

mind that European influences since most conservative students. Buddhist influences in the Malay Archiof the meander there would, however, sufficiently explain any sporadic cases in Polynesia. As to the instances of the Pueblo Indians is specified by a recent strange surprises of native intercourse in this part of the world, I think one of the most curious is a neck ornament of elephant ivory imitating a whale's tooth, from the Fiji Islands, in the British Museum.

As to the appearance of the meander in the ornamental systems of Ancient America, I have personally traced its diffusion, and that of the patterns with it is generally associated, from the Buddhist art of Thibet and Mongolia through Siberia and the Aleutian Islands as far as Alaska, in modern survivals.* The Mongolian

Ancient Pueblo pottery from New Mexico. Museum, Washington. National

descent and affinities of the native races of America have been asserted or noticed by many writers. The theory of the settlement of America by way of Behring Straits and the Aleutian Islands and by way of voyages in the North Pacific is that of the

An inthe time of Columbus did not account teresting illustration of native interfor both phenomena in Indian art and course in our own days in this quarter throw the Northmen out of court. The of the world is in the Berlin Ethnographic Museum, a girdle of Chinese pelago and the occasional appearance coins on a native woman's dress, from Cook's Inlet, Alaska.

> The Mongolian character of the article in Scribner's, which also men-



Chinese pottery anthemion; Buddhist derivative.



Chinese pottery anthemion; Buddhist derivative.



Chinese pottery anthemion supporting lotus trefoil;
Buddhist derivative.

tions the language of the Navajos as being identical with that of the Tinneh tribe of Alaska. A visit of Chinese Buddhist priests to America in the fifth century A. D. is an attested fact of history.* Buddhist influences in Ancient America are noted by Sir George C. M. Birdwood, in his South

^{*}In the Ethnographical Collection of Berlin, which are the only ones of sufficient extent for the Amoor Valley, for the Yakoots and for Alaska. There are also important in-stances of the Siberian meander at Amsterdam.

⁺For instance, by the most recent authority on American history, "History of the New World called America," by Edward John Payne, Fellow of Oxford College. According to the London "Academy," "He connects unreservedly the peoples of America with the Mongol or Tartar races." races.

^{*}See "Fusang, or the discovery of America by Chinese Buddhist priests in the fifth century," by Charles G. Leland.



Spiral scroll derivative from Buddhist ornament. On an Eye-shade from Alaska in Berlin. Author's sketch,

Kensington Handbook on "The Indus- of Asia Minor on the others. I persontrial Arts of India."

tion of the Encyclopædia Britannica, let found in a mound-builder's tomb of in its article on the Zodiac: "A large West Virginia in 1838, with the result detachment of the (Chinese) cyclical that he specified offhand thirteen of animals found its way to the New the twenty-three characters as being World. Seven of the twenty days con- identical with those known to him stituting the Aztec month bore names from the Siberian inscriptions. evidently borrowed from those of the Chinese horary signs. The Hare (or conclusion that as long as we can prove Rabbit), Monkey, Dog and Serpent an unbroken continuity for the history reappeared without change; for the of the meander pattern throughout the Tiger, Crocodile and Hen, unknown in whole world, outside of Ancient Amer-America, the Ocelot, Lizard and Eagle ica, we are justified in relating its preswere substituted as analagous."

ally make known to Professor Donner According to the latest (Ninth) Edi- the inscription of the Grave Creek tab-

All these various points lead to the ence there to a similar historic con-The area of diffusion in Ancient tinuity. I am satisfied for the moment American Art of the ornamental sys- to have traced the ornamental system tem to which the meander belongs to which it belongs in modern survivals shows a gradual weakening of the from Thibet through Mongolia and motives (as regards adherence to Siberia to Alaska, and I am satisfied to normal forms) and of their frequency, rest my case for the relations of Anfrom North to South, between the ex- cient America with Asia on the followtremes of Arkansas and Peru, which ing quotation from the most recent are the extremes of present excavation author on the "Migration of Symbols," of ancient remains in large amount. Count d'Alviella, Professor of the His-This is what we should expect on the tory of Religions in the University of theory of an introduction from Asia. Brussels: "It must be admitted that The recent discovery of Siberian in- the art of the far East has been proscriptions in an alphabet resembling foundly modified by Buddhist types the Carian and Lydian of Asia Minor,* which came from India. As to Anfound in the valley of the Yenesei, has cient America, Gustave d'Eichthal had been supplemented by a still more re- already drawn attention to similarities cent discovery made known to the which exist between the monuments of Ninth Oriental Congress (which met in Central America and of Buddhistic London in September) by Professor Asia. For my part I am more and Donner, of Finland, of a Siberian in-more inclined to admit, not the Asiatic scription of the eighth century A. D., origin of the American populations, but, having Chinese characters on one side what is quite another question, the of the block and these same characters intervention of certain artistic influences radiating from China, Japan, or the Indian Archipelago long before the Spanish Conquest."

^{*}These alphabets were generally abandoned in Asia Minor at least as early as the fourth century B. C.



Greco-Roman ornamental details. From Trajan's Forum. Lateran Museum.

conclusions of d'Alviella have been sance derivation—that is, they are sur-largely reached through the study of vivals of fifteenth and sixteenth centhe symbol called the Swastika, which tury Italian copies of Greco-Roman I have proven in the "Grammar of the originals, which in their turn are de-

It is interesting to notice that these of our spiral scrolls have a Renais-



Byzantine well, Venice. Motives derived from the classic; guilloche border above, inverted debased anthemions, spiral scrolls.

pattern.

III.

In order of prominence among the formal linear patterns which are traditional in nineteenth century use, we may next mention the spiral scroll.* Most

Lotus" to have been originally a sec- rived from the earlier Greek, and these tion or segment of the meander again are decorative evolutions from Egyptian patterns. When our spiral scrolls are not Renaissance, they are copies dating from the Greek Revival of the late eighteenth and early nineteenth century, or they are copies taken by recent decorators from the recent publications of historic decorative art. The theory of spontaneous generation, supposed natural aptitude of any one who has "tools and an

^{*} I have not drawn any distinction in this paper between the purely linear spiral scroll and those which bear foliage and flower details. The evolution of these last from the lotus spiral belongs to the later Greek art originally.



Byzantine capital, Ravenna. Details derived from the classic.

spiral scrolls without reference to tra- compels it. dition, shipwrecks utterly when brought traditional, that of the artisan-say face to face with historic facts as far a stove maker-who recasts an old as Europe is concerned. Tradition is pattern with or without slight modifinot only the rule but it is a rule with- cation-or it is special, the education out exceptions.

Theorists and reviewers (who are generally more than twenty years old) can sit down at a desk and design a spiral scroll on the writing pad which will carry their article to the press. same thing, and that primitive man can do, and does do, anything that a modern civilized child can do. But somehow it happens that reviewers and children who have grown up, or are growing up, surrounded by the origidecorations for the market. Decoration is a trade which presupposes, like all

instinct for decoration"* for making other trades, a special education and This education is either of an architectural school or a school of decorative art where the pupil is surrounded by historical examples whose influence comes to the same thing.

The question is not whether a per-They will then announce on the same son who braces himself up to answer writing pad that any child can do the Mr. Goodyear's theories could not invent something new in the way of a spiral, but the question is whether before the time of theoretic instruction in decoration, which never existed before 1850, anybody who was an artisan decorator ever did brace himnals of the forms which they fancy self up to do such a thing. When the themselves to be inventing, are not the question is put in this way the argupeople who are called upon to design ment is all on my side to any one who knows anything about the history of ornament.

> As a matter of fact, under normal conditions, wherever and whenever a

^{*} See quotation from the "Critic," in my first paper.



Romanesque anthemions and spiral scrolls. Detail of the bronze chandelier at Hildesheim, XIth century.

new departure is made in ornament, that new departure will be from a natural form or a natural phenomenon. Where the pattern is abstract, schematic, or apparently purely linear, that pattern will be a traditional survival of a form which was once also a form of nature, and the modifications made in it will have been gradual and evolutionary.

I am speaking now of the spiral scroll especially, and having asserted that all our motives of this character are fundamentally classic, and Egyptian before they were classic, I wish to speak of

the spiral scrolls of other ornamental systems—mainly to say that, like the snakes in Ireland, there are none—none that is that are not derived from the system under discussion.

We have seen already that the earliest Hindoo art known to us is Buddhist under Greek influences,* and we must turn now to the "Moorish," or, more correctly, Arab Mohammedan system, to notice that this also is of ultimately classic derivation. Aside from Persian influences on Arab art, which again go back to the

*There are indications that Persian and Assyrian influences in India preceded the Greek, but as far as dependence of their forms on Egypt is concerned the argument is the same.



French Romanesque details derived from Byzantine (St. Amand de Boissée).



English Gothic details, derived from Romanesque. Iron-work of a church door.



Italian XVth century detail; direct revival of the classic.



Modern glazed Sindh pottery. Traditional pattern of inverted lotus buds and trefoils, derived from the classic.



 $\begin{tabular}{ll} {\bf Modern~glazed~Sindh~pottery.} & {\bf Traditional~Mohammedan~pattern}~;~inverted~lotuses. \end{tabular}$



Arab capitals of the Alhambra. Motives derived from Byzantine.



Arab detail from the Alhambra. Motives derived from the Byzantine.



Inlaid work of Agra. Traditional Hindoo lotus patterns (Mohammedan and Persian) derived from classic.



Shield, damascened in gold; Panjab. Traditional lotus patterns derived from classic.

same original elements,* Arab ornament tine culture has been well explained by was derived from Syria, Egypt and Mr. Freeman in his lectures on the North Africa (all of which were Byzan- Saracens and is otherwise a commontine [Roman-Greek] provinces) in the place of the average historian. All the seventh century A. D., and at the time Arab and Mohammedan spirals (genof the Mohammedan conquest of these erally with lotus trefoils) are modifica-countries from the Byzantine Empire. tions and evolutions from the Byzantine

*Sassanian art is bastard classic.

The dependence of the Arabs on Byzan- Greek. If you will turn now to a map of the area of the Mohammedan religion, which means Mohammedan art

and culture also. you will find it reaching in Africa from the shores of the Mediterranean to the River Gambia, to the Niger, to Lake Tanganika, and

In Asia we find the Mohammedan

to Zanzibar.*



Tinned brass bowl, incised; North West India. Traditional patterns derived from classic.

^{*}See map published in "Islam and its Founder," by Stobart Society for Promoting Christian Knowledge).

Minor and Persia through Turkestan or the Congo country or in other parts into Siberia as far as the River Ural, of barbaric Africa.* The Somali and as far as Tobolsk, as far as the Irtish Abyssinian ornament is of course Arab. Archipelago, Sumatra, Java, Borneo, who assert the spiral scroll to be one of occur in barbaric Africa at all, except-

color spreading from Arabia, Asia Otherwise it does not occur in the Niger

and the Obi. We find the Mohamme- If we turn to the Malay Archidan color spread over India, in the pelago, as compared with Polynesia, Peninsular of Malacca, and the Malay the case for the historic traditional continuity of the spiral scroll becomes and the Celebes. Now let the reviewers a certainty. It is here that the Ethnographical Collections of Leyden come the natural ornaments of barbaric man in play, the only systematic and comconsider the point that it does not plete Collections for the Malay Archipelago in the whole world. Let us reing in cases of palpable Moorish or member now that the ornamental sys-Arab art. I have seen it, for instance, tem of India was in the first instance, on some very rude brass vases of Moor- as known to us-Buddhist, under Greek ish design from the Niger, in Berlin. foreign influences as explained; second -- Arab Mohammedan. The spiral scroll ornament of modern India is a mixture and survival of the two. (The more formal classic style of old Buddhist ornament has disappeared in India.) This is the ornamental system of the Malay Archipelago. One of the most astounding monuments of Buddhist

> *The best collections for Africa are those of Berlin and Rome (Kircher Museum).



Mohammedan Malay lotus spirals on a Dyak scabbard from Borneo. Author's sketch, Brit. Mus.



Lotus spirals, Mohammedan Malay system, Design on paper cloth from the Islands of Ternate and Tidore, near New Guinea. Author's sketch, Leyden.



Top of a Dyak coffin, Borneo. Moham-medan Malay patterns derived from



Barbaric scroll patterns derived from the Mohammedan Malay system. On a wooden shield from the Island of Ceram, Malay Archipelago. Author's sketch, Leyden.



Barbaric lotus pattern, derived from the Mohammedan Malay system. On a wooden shield, from the Islands of Ternate and Tidore, near New Guinea. Author's sketch, Leyden.

architecture is the ruin of the temple Archipelago,* we should not be startled man, consider that the spiral scroll is absolutely foreign to the ornamental systems of Polynesia, of which there are several. The limit of the spiral



Lotus trefoil pattern, derived from the Mohammedan Malay system, from the Islands of Ternate and Tidore near New Guinea. Author's sketch, Leyden. Com-pare the Saracenic pattern from Algeria.

scroll Eastward in the Collections of Leyden is the Admiralty Islands, bordering on New Guinea, which is part of Malaysia.

In the Admiralty Islands it is sporadic. In Leyden there are only two instances. In the Berlin Collections the sporadic cases of the spiral are found in other islands also adjacent to New Guinea, Southeast of the Admiralty Islands. Considering that the whole of Polynesia is conceded to have experienced influences from the Malay

of Boro Boeder on the Island of Java. at the sporadic appearance of spiral The present ornamental system of Ma-scroll ornaments farther East than the laysia is mainly the Mohammedan Admiralty Islands, but since I have re-Arab. The Malay alphabet, the Malay viewed the Polynesian Collections of ornament, the Malay religion, and the New York, Washington, London, Am-Malay culture are all derived from sterdam, Berlin, Oxford, Paris, Rome India. Now let the theorist, as to the and Leyden, and the publication of innate ornamental habits of primitive Partington for Polynesian ornament, I am willing to rest my case with the simple statement that the spiral scroll is foreign as such to all the ornamental systems of Polynesia, and that the system of the Malay Archipelago is the Mohammedan Arab, which is derived from Byzantine Greek.

There only remains the case of New Guinea and New Zealand. Not only does New Guinea border directly on the Malay Islands, but it is geographically part of Malaysia. The princes of the Island of Tidore have actually been the potentates of the Northern Coast of New Guinea. The New Guinea ornamental system shows degraded and barbaric forms of the Mohammedan spiral scrolls of Malaysia. From these once more are derived the spiral scroll ornaments of New Zealand.

*The whole of Polynesia is known to have been peopled from Malaysia. Dr. Serrurier, Director of the Leyden Ethnographic Museum, tells me that many Polynesian peoples emigrated from the one island of Beroe in the Malay Archipelago. These emigrations are supposed to have occurred before the introduction of the use of metals and consequently of Hindoo culture, but later influences are unquestionably implied in the original fact.

†This statement is the result of personal comparisons and observations, but I have the assent of Dr. Serrurier, Director of the Ethnographic Museum of Leyden, to its probability and reasonable nature.



Ornament of a Malay ship. Direct copy from the Dutch Renaissance. Author's sketch, Leyden.





Idol and wooden pillow from the Northwest Coast, New Guinea. Barbaric ornament derived from Mohammedan Malay. British Museum.

The Maoris are supposed emigrants from Tahiti, but the ornamental system of New Zealand has no relations



Ancient Pueblo pottery, New Mexico.

Maoris. It will show the possibilities and surprises of intercourse in this part of the world to say that a Japanese

bell was found in the possession of the Maoris, which had been in New Zealand before the time of the first European settlers. My informant is Dr. Codrington, the great authority on Polynesian and Melanesian languages.

Now let us turn to the evidence of the Berlin Ethnographical Collections, which are simply marvelous in the mass and comprehensiveness of their material for the areas below named. Once more, and this time through Buddhist transmission, we can trace the spiral scroll from the Amoor valley; where the ornamental system is as familiar to us as that of the Malay Archipelago;

point I leave it for the present-refer- ranean world.* There is no pattern of ring for Ancient America to the remarks which it can be asserted with so little previously made on the meander.

IV.

I have re-examined, last Summer, in the museums of Berlin and Leyden and in the Pitt-Rivers Collection of Oxford, the question of the spontaneous generation of the rosette, with the following conclusions: The area of this ornament

is far more limited than the area of those just considered. In modern use it is historic and traditional. In ancient with this supposed earlier home of the European use it was limited to Mediterranean countries and their influences, originating in Egypt and transmitted to Mesopotamia, Phenicia, Greece and Italy. Its use was more and more limited in the later Greek and Roman art, and consequently in the Byzantine, and I am not acquainted with it in Arab use to any marked extent. It was extremely common in ancient Buddhist art, but appears to be rather more limited in modern Hindoo sur-It is unknown to barbaric Africa and unknown to Polynesia, unknown to New Zealand and New Guinea, mainly unknown to Malaysia. Its rare appearance in Ancient American art must be classed with problems suggested by the normal lotus in the same art, in stone carvings and in gold, and



Sindh lacquered box, traditional pattern of rosettes.

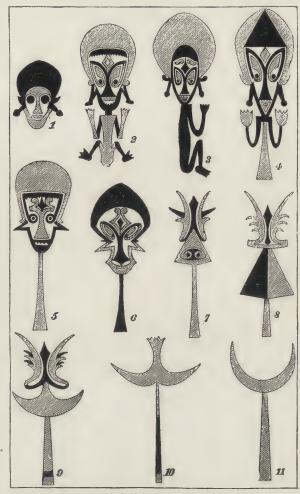
through the Yakoots of Siberia to the I think can only be explained by direct Aleutian Islands and Alaska. At this transmission from the ancient Mediterreason, or show of reason, that it is common and natural to all barbaric and primitive peoples; for it does not appear to be common or native with

^{*} I have offered in the "Grammar of the Lotus" some of the evidence in favor of Phenician voyage from the West coast of Africa to America, in ancient times. I have a sketch of a gold repoussé Ionic lotus in the ancient Mexican Collection of Berlin which is positively unmistakable in its Egyptian identity. "I have already published a series of these ancient American lotus patterns, in the work referred to ferred to

any. The rosette is an obvious combination for modern kindergarten scholars who are taught to make elementary geometric patterns and to use petals of flowers and floral forms as suggestions for geometric combination-but I do not care to have my case damaged by an appeal to the kindergartens. I prefer to appeal to history and to the ethnographical collections of the world.

I would recommend above all to inquiring minds on this general subject of the continuity of the historic patterns, a study of the ornamental systems of the Pacific, as showing what barbaric man really does do and how many different things he does, when he is left to his own ornamental instincts without the extraneous influence of a superior civilization. A natural appearance or phenomenon of some kind or other appears to be the invariable starting point. As the pattern itself then becomes a tradition and the point of departure. for a new copy, this is gradually simplified until all semblance of the original is lost. The human figure or some portion of it was undoubt-

there is a series of paddles showing the gradual transformation of a human figure carved upon them, into a crescent case of a fish head used to decorate the nated patterns, were fetiches the shape of a capital letter W. There taken for granted. are multitudes of these designs which connecting links or of the originating form, but I believe it is the conviction of experts in this department, that a purely arbitrary or ideally schematic form was rarely or never the first ele-



Evolutions of a pattern derived from the human figure, on paddles of the Pacific; according to General Pitt-Rivers. From John Collier.

edly, in many cases, the initial form. ment of the pattern. The introduc-In the Pitt-Rivers Museum, at Oxford, tion of different colors in weaving or basket work, to produce diaper patterns, would perhaps be the only exception to this rule. That the figures of men, supported by a bar. There is also the fish, animals and birds, which origijunction of the paddle blade with its totems, that is to say religious emblems handle, which finally degenerates into or rather talismans, may be always

The following positions have been cannot be explained for want of the established or taken in my two Papers thus far. First: inside the Egyptian system the normal* lotus asserted such

^{*}By the word "normal" I mean a lotus pattern or picture which is visibly a lotus to an Egyptologist or specialist who has not examined the purely conventional evolutions of the plant.

an ascendency as to abundantly account choice from the series arranged by for any evolutions into schematic pat- Mr. John Evans in the Pitt-Rivers

terns for which fair evidence is offered. Museum at Oxford to show the Second: outside of the Egyptian-Greek degradation* of the gold stater of systems and its developments none of Philip of Macedon as copied by the



Canoe ornaments, Southwest Coast, New Guinea; contrasting independent barbaric art with Malay influence. British Museum.

On this last point I feel disposed to insist a moment longer. In the *The word is used in a geologic, not in an invidious series of coins herewith we have a sense.

the patterns known to the Greeks have ancient British, which began with a ever been independently developed, head of the king and terminated in Third: the evidence of Polynesian ornathe transformation of a wreath into a mental systems proves that an absolute sort of cross. The steps of evolution dissimilarity between the thing origin- (or degradation) are much clearer when ally represented and the ultimate form more links of the series are illustrated, of a pattern is an elementary fact in the forms shown being copied from the evolution of patterns.

a cut in the "Primer of Art," by

Rivers Museum. picture of an owl. The letter A is depicture of a sieve, the letter F from the picture of an asp. We do not find decorative availabliity. the slightest resemblance between we all acknowledge the derivation European cannon, has on the sides of

John Collier, which was given me by living on the Hudson during the Colo-Mr. Balfour, the Curator of the Pitt- nial period, which was decorated with The fact, however, the words "Public Notice." of this evolution has never been words had been copied by the Indian doubted by any one who examined the owing to their frequent appearance on evidence. Parallels are also found in the Colonial sign-boards addressed to the history of the alphabet. The letter trespassers. He could not read them, M is derived from the hieroglyphic but his respect for the civilization which furnished him with gunpowder rived from the hieroglyphic picture of and rum led him to regard their frean eagle. The letter L comes from the quent appearance within the limits of picture of a lion, the letter H from the this civilization as something suggestive of importance and consequently of

There is an analagous case in the these objects and the alphabetic signs Leyden Museum, where the model copy which are derived from them, and yet of a Malay pirate vessel, armed with



Evolutions of the Macedonian gold stater design, as copied by the ancient Britons. As arranged according to Mr. John Evans in the Pitt-Rivers Museum, Oxford.

prising when a foreign nation is the der and cannon from the Dutch. inelago.

when the successive steps of transfor- its prow a scroll pattern distinctly mation are shown.* I once wrote the copied in minor details from the Dutch French word "jugera" in a manuscript Renaissance. I noticed a collier canaland it was set up by the printer as boat in one of the Leyden canals, just "pigern," and I could not deny that outside the Museum, which had the the word as I had written it was ac- identical pattern in the identically corcurately reproduced by the type-setter. responding place. The canal-boat had We might find many parallels to the derived the pattern traditionally from problems offered by pattern ornament earlier and more important Dutch vesin the hieroglyphics of some modern sels and Dutch East India traders. penman. The transformations in ques-tion are much more rapid and sur- because he obtained originally his powcopyist. In such cases the foreign curious point of this instance is that imitator is always subject to the in- the general motive of the same pattern fluence of a superior and ascendant had reached the Malays by way of civilization, and being both foreign and India, through Mohammedan art, deinferior misunderstands and miscopies rived from Byzantine. The Dutch pataccordingly. This was the relation of tern was derived from Spain and Italy, the Greeks to the Egyptians in the which latter country had taken it from Second Millennium B. C.; this is the re- Roman ruins. In this particular inlation of the spiral scrolls of New stance points as far removed as Hol-Guinea to those of the Malay Arch- land and the Byzantine provinces of Egypt and Syria—periods as far re-I have been told by Professor W. R. moved as the time of Mohammed and Ware of a platter made by an Indian the Dutch sixteenth century Renaissance-had both transmitted to the Malay Archipelago a design which can

^{*}Isaac Taylor, "The History of the Alphabet."

be found on modern Dutch canal-boats prehistoric patterns from the South and on the temple ruins of the Empire and South-East, because the arts of of Alexander the Great, and which is metal, displacing the use of stone imhistorically traceable in both cases to plements, also spread from this quarter the culture influences of Egypt.

people. This holds especially of the the commerce carried with it. diffusion of the arts of metal. It is eled from one original centre over the of the lotus, one of which (the first) entire world. In other words, trade offered no proofs for any evolutions and commerce are the essential factors whatever, while the second has related of the problem, and the history of entirely to the historic continuity and ancient ornament as traced to Egypt is traditional survival of certain patterns, really the history of commerce and of as opposed to a theory of the sponcivilization. The ascendancy of the su- taneous generation of the same, and as perior civilization manifests itself in to the origin of these patterns I have various exterior ways, of which the copy- said nothing. However, the most diffiing of forms of art is generally the most cult part of my task is done. Within obvious, and the most lasting, as regards the limits of Greek and European prethe question of evidence, but the main historic art, it is a question of proofs factor must always be essentially the which are very easily offered, and which civilization itself. The prehistoric to my mind are perfectly convincing. I "Bronze Age" of Europe copied its shall approach these in my next Paper.

(according to my contention). What Historically speaking, all copying of the Greeks were really learning from art forms results from historic waves Egypt in the Second Millennium B. C., of civilization, which carry with them was the arts of civilized life, but the comforts and improvements in material evidence of the commercial intercourse living which are of use to the copying survives in the lotus patterns which

I have thus devoted two Essays oshighly probable that these have trav-tensibly to the ornamental evolutions

Wm. H. Goodvear.

(TO BE CONTINUED.)





Group, from the Albert Memorial, London.

THE INFLUENCE OF THE EARLY RENAISSANCE ON SCULPTURE.



pride of the Eng- ary stages. lish race, to the

painting.

this inferiority would carry us beyond ideas has passed beyond this stage, and sance which we have already traced in ant art of the modern world. our architecture. In a striking passage be music.

HE art of sculpture world, setting forth that Christian ideas, has had a check- being abstract and of the soul rather ered career, nor than of the body, could not be adecan the contem- quately expressed by sculpture, which plation of its past he holds to be incapable of expressing history gratify the the emotions, beyond certain element-

He then shows that painting has a same degree as that of architecture and wider scope and was equal to the thought of the Renaissance, but that To seek out in detail the reasons for the increasing abstraction of modern our present purpose, which is to look no thus music, with its double character, farther back than will justify our hopes "La musica e il lamento del amore, o il and expectations for a more glorious preqhiera dei Dei," and its universal future, which will be affected by that message, appealing to all nations, irresame development of the early Renais- spective of language, is the predomin-

Now, to this exclusion, as it were, in Mr. Symond's "Art of the Italian of sculpture from a future and from the Renaissance," is set forth the idea that expression of Christian ideas, he makes while the art of the Pagan world was one exception, namely, the class of sculpture, that of the Renaissance was tombs, for here the now soulless body painting, and that of the modern will has returned to that state of peaceful calm and repose which the Greeks This thesis he supports by arguments found so essential to sculpture, and we drawn from the religious changes of the shall see in our brief review of English



WEST FRONT, WELLS CATHEDRAL.

work how large a place is filled by the an elevation, still we cannot say that class of monuments and tombs.

painting are far more external. Now, thy of our respectful admiration. of the Roman remains found here A still higher level is reached in sculpture forms an insignificant part, the Angel of the Annunciation from several rudely-carved altars and tombs the entrance side of the octag-being the most important objects. onal Chapter House of Westmin-Moreover, the religion of the Druids ster Abbey, where "Christ in Madoes not appear to have been idola- jesty with Angels attending" occutrous, and Stonehenge contained no pies the quatrefoil of the entrance arch. idol. When Nicola Pisano started the flanked above by the Madonna and this revival of art in Italy the classic sar- Angel, in upright trefoil-headed panels cophagi and vases in the Campo Santo on either side. Its dignity and simplicat Pisa were the sources of his inspira- ity will recall to our readers the best tion, but our sculptors had to borrow French work of Notre Dame and of from France, along with the elements Rheims, and must be ascribed to the of Gothic architecture, the means of same French influence which so largely producing the wonderful semi-archi- shaped the characteristics of the Abbey. tectural sculpture of Wells and Lincoln.

modern state of sculpture that we are of the qualities of his art, independent compelled to distinguish between ped- of Architecture, sees too often only a estal and architectural sculpture, that want of anatomy and grace, rendering is, between statues and other work, in- them insignificant beside Greek and tended to be complete in themselves, Italian statuary, and so no art has been as opposed to sculpture intended to so much studied abroad as sculpture. group with and form part of the archi- Flaxman, Gibson, Chantry and others, tecture of a building.

examples of importance of pedestal mastering the secrets of their art. sculpture of the mediæval period in England, for our tombs even have a ment of architectural sculpture within large element of architecture, as in the the possibilities of the knowledge then well-known Bridport Tomb at Salis- possessed in England, in the numerous bury and as in those of the Tombs tombs, often perfect gems of art, in the choir at Westminster Abbey, which exist and were still more numerwhere the relations of Henry III., the ous formerly in our cathedrals. royal builder of the choir, repose in lamentable destruction of many shrines, shrines of purest harmony with the tombs and images during the Reformasacred edifice. In fact, we may say that tion and Puritan times has deprived us mediæval tombs are miniature buildings of many masterpieces, and the effects containing panels and spandrels orna- of these movements were long, and are mented with sculpture.

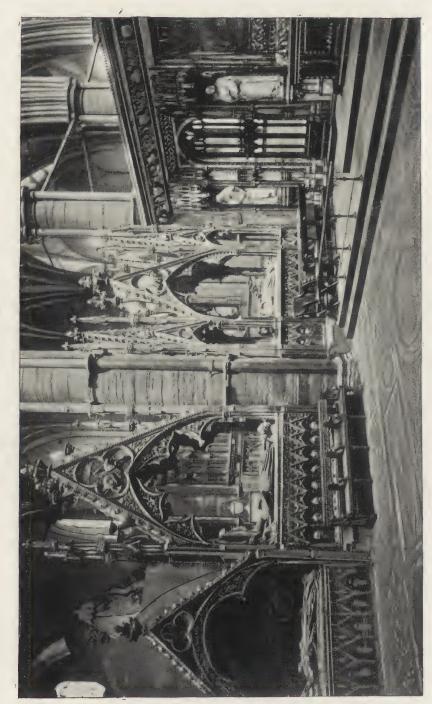
But, valuable as are the lessons of sculpture for the highest ends. taught by them and by the wondrous façades of the cathedrals at Wells and to above, came the beneficial influx of Lichfield, both as to the distribution and Italian ideas and artists in the reign of harmony of architecture and sculpture Henry VIII. Chief of these artists and as to the extent to which liberties was Torrigiano, contemporary of Ben-

we had advanced very far in sculptur-If in England we have had no ing the figure. The famous angel Michael Angelo in sculpture the cause choir of Lincoln shows work of a is that we have had no Nicola Pisano. higher quality, the spandrel angels are No art in England is so entirely im- designed in powerful lines of contrast ported; architecture in all countries to the spaces they occupy, and have a has roots in the soil, but sculpture and dignity of purpose and expression wor-

An architect is naturally inclined, perhaps, to dwell too long on these It is an unfortunate necessity of the great works, while a sculptor, jealous down to Alfred Stevens, in our own It is safe to assert that there are no day, all spending long years in Italy

> We find, however, a high developnow felt in a prejudice against the use

Before, however, the events alluded must be taken in treating figures at such venuto Cellini and Michael Angelo.



CRUSADERS' TOMB, WESTMINSTER ABBEY.

later on.

fused to go to England with Torrigiano are. on account of this very fracas, which the vain-glorious pomp of the later purposeless lives. Renaissance treatment of man's last resting place. with a similar style of detail.

Now it has been said that the next

It is to the filial piety of that amateur rococo bas-relief of the conversion of

How he broke the nose of the latter of Art and Learning, James I., that we in reply to an unfavorable criticism owe the tombs of Queens Mary and of his works is well known, and may Elizabeth and also that of his mother, serve to caution us in our remarks Mary Queen of Scots. It was a characteristic stroke on his part to bury In his most valuable and curious three Queens in two tombs, but we need biography, Cellini tells us how he re- not complain, seeing how good the two

The stately canopy of pure classic caused him to hate violently the base orders and details shows the advance insulter of his hero, Michael Angelo. that Italian ideas had made by that It is true he also detested "Questi period, and the general shape recalling diavoli d'Inglesi," but he did not all the a triumphal arch seems not inapproprisame get on any better with the French, ate for the Christian who has conquered and had he come to London, instead death by dying, and is resting in calm of to Paris, our art might have greatly repose beneath the Tabernacle, his face benefited. Much of the work of that turned to the coming dawn. These two period was unhappily lost when Henry tombs, however, are above the level of VIII.'s favorite palace of Nonsuch was the Elizabethan tombs in general, destroyed. It was a timber building even that in the background, to filled in with plaster panels containing which we shall now allude. Its detail some hundreds of single figures in low and execution are more advanced than relief. Any one who knows Italian others—delightfully quaint and naive, Art will realize what a glorious work it where father and mother and diminishmust have been; when deprived of ing row of children, all in their everyday their accustomed marble the Italians clothes, quaintly colored in brightest applied their wonderful gift of low re- tints, kneel piously praying for that lief sculpture, with the greatest effect mercy they seem to us surely to have to the facile plaster. We have, how-gained. The Norris family at least ever, a masterpiece by Torrigiano in claim our sympathy; their tombs the marble and gilt bronze Tomb of in the background show us father Henry VIII. in his Chapel at the and mother and six kneeling stalwart East End of Westminster Abbey; this sons, five of them clad in armor as they work, inclosed in its grille, forms one died on the field of battle, for king and of the most complete examples of country, and a sixth, beardless alone of the early Renaissance applied to all the group, with cheerful uplifted Tombs; the stately pomp, but pious face, as became the survivor of such a treatment of the King and Queen family, active and vigorous, rejoicing in shows the transition between the devo- existence, untroubled by the cares and tional simplicity of the mediæval and doubts with which we spoil our often

Here then we reach the summit of our Torrigiano also exe- ancient art, and crossing the Puritan cuted other tombs, using the same gap we must reascend to the level to black polished marble and gilt bronze which our modern artists have carried us at present.

The period of the Restoration was great sculptor in England was Alfred one of relaxed efforts, the high earnest-Stevens. We cannot, however, make ness, the overstrained force of the prequite such a jump as that, for we vious generation was followed by the have to allude to the great group of natural reaction of a mockery at all Elizabethan and Jacobean tombs, serious effort. Wren alone of the from the best of which, indeed, the artists of his day was inspired by later sculptor derived the leading idea noble ideals, but he woke no echoes of his masterpiece, the Wellington in the sculptors of his time—the Pediment of St. Paul's contains merely a



CHAPEL OF QUEEN MARY, WESTMINSTER ABBEY.



TOMB OF QUEEN ELIZABETH, WESTMINSTER ABBEY.



HENRY VII. CHAPEL, WESTMINSTER ABBEY.



CHAREL OF ST. JOHN, WESTMINSTER ABBEY.

St. Paul, possessing only a certain pic- ist, if the closeness of imitation of

stone pedestal.

walls of our old cathedrals, Westminster Abbey receiving a large share, perhaps its finest exponent; his illusto need more than a reference. His on the façades of that building accord physical weakness prevented his

executing personally his own sculpture and led him to invent the pointing machine by which sculptors have been enabled to abandon the chisel, to rely on modeling alone, which is, architecturally considered, a falling off from the practice of Michael Angelo and the old sculptors.

Chantry is better known as an artist than Flaxman, which is perhaps due in part to the literary skill of his assistant, Allan Cunningham, and to the large fortune which he amassed by his art and left to the Royal Academy for the annual purchase of works of art, both causes contributing to fame. Of his his preserve work, the Sleeping Children, in Lichfield Cathedral, is perhaps the best known and most popular example. The children are portraits, which is held to excuse their want of beauty of feature. Another well-known work of Chantrey's is the monument of Judge Mansfield, in the Abbey, which would be better appreciated if it were placed in St. Paul's. Gibson was perhaps a greater art-

turesqueness, in common with the Greek work be the test. There is a group which accompany it on either group of his in the Houses of Parliaside. The most notable effort of Gib- ment, which illustrates the position of bon, the sculptor of the period, was the sculpture in relation to architecture at statue of James II., at Whitehall, where this period. Everyone whose artistic the King figures as a laurel-crowned instinct is even moderately developed Roman general, toga and armor and recognizes at once upon seeing the work all to match, a work in bronze on a that nothing could be more inharmonious. The Greek character of the The efforts of sculptors were then work is destructive by its scale and feelprincipally turned to monuments, hund- ing of the Gothic background, and the reds of which are plastered over the whole room seems crowded by the importance given to the statuary.

The Gothic Revival in fact had no the most popular being the night- counterpart in sculpture; there was peringale monument of Roubillac, who, haps too little to go upon, hence sculpthough born at Lyons, executed all his ture fell into the hands of a new race of work in England, where he died in inferior carvers, who produced regi-1762. We must be forgiven if we ments of saints and kings, at so much a hurry on from this period to that of head, generally doll-like in size and Flaxman, in whom pure outline found vacuous in expression. We should perhaps except Thomas, the sculptor of trations to Homer are too well known the Houses of Parliament, whose figures



The original plaster model of Marius in South Kensington Museum, by Bailey, R. A.



THE SLEEPING CHILDREN, LICHFIELD CATHEDRAL. BY CHANTRY.



QUEEN VICTORIA (BY GIBSON), IN HOUSES OF PARLIAMENT, LONDON.

the building of Birmingham grammar the architect, and by whom he was brought to London, where he worked fall. for the Westminster Palace; afterwards Palace being perhaps his best work.

with the style, though perhaps not in of study in your art schools, but to us themselves of very great value. Thomas the head of Marius is a painful reminder was one of the masons employed for of the long stumping by which we reproduced Menelaus' ugly countenance, school, of which Sir Chas. Barry was and Eve seems to have been a sister of Venus, which accounts, perhaps, for her

We feel unequal to a serious treathe attempted architecture and sculpture ment of this art; we offer our pen to of his own, the fountains in Kensington the critics to fill in at their pleasure. There was of course some good work



Eve Listening. South Kensington Museum, by Bailey, R. A.

show other examples of this period, clear as we could wish. but the work of Mr. Bailey, R. A., which we give above, will enable our mainly in small houses, there is small legacy from the great Exhibition.

If sculptors then had not much share produced, but we may safely say it in the Gothic Revival, they found in the was on the wrong path. Architects great Exhibition of 1851-that turning have repented and turned from their point in English art—an opportunity of evil ways and so have painters, but the displaying the unaided resources of movement of sculptors is slower and sculpture. We regret not to be able to the traces of a reformation are not so

Amongst a domestic people, living readers to judge of the Venuses, Eves, scope for semi-Grecian statuary. It Adams, and Apollos, that now deco- savours of affectation to adorn the rate-fortunately only in plaster-the home with the conventional product Crystal Palace at Sydenham, and are a of the studios, borrowed from the art of a people whose habits of life were We have no knowledge of the course the reverse of our own. Even in our

large country houses, the want of good work, demanding the highest the corridors of Eaton Hall, Cheshire, served. or any other modern Gothic hall, while the device of a sculpture gallery in England in the past has been due to annexed has the savor of the pedantry the absence of feeling for detail and of a private museum.

of aim.

sculptor's work.

sculptor to solve. What for our daily bers of the Allegory Company. A life have they to offer us? Nothing of violent reaction against such work beauty is superfluous in this dull has endowed us with monotony of ugliness, which we confess more monstrous "portrait" statue, the to form three parts of this London of adornment of the Thames Embankours. Surely in vain we cover our- ment, where the heroes of this generaselves in the sweepings of the old world, tion, in brazen boots and cheap tailorbut the most successful hunter of ing, address to invisible crowds the curios has least adorned his house, same boring speeches which they The dry-bones of dead art are in place uttered when alive. In the midst only when in the museums or the studios. of such a wilderness of misapplied Sculpture co-operating with architect- art the statue of the Queen at Winure can fill the void and, working of chester, by Mr. Alfred Gilbert, A. itself, can on the lines of the true R. A., displays the true application of Renaissance also solve the other parts the early Renaissance; the elaborate of the problem.

bronzes that occupy our mantel shelves with the simple handling of the flowing and let our sculptors give us instead robes. In this excellent work we may ideal work, two feet instead of six feet see how the life-like portrait of the high, as Sir Frederic Leighton has lately Queen is enhanced by such masterly done with the "Sluggard" and the "Py-characterization; while a glance at the thon Slayer." We welcome this step in back of the Throne demonstrates that the right direction, and we regard the no labor has been spared to give that movement amongst architects in favor sense of repose which is induced by of the early Renaissance still more completeness of detail and design. favorably, for the profuse detail of that No work of art can be complete withstyle is the joint product of architect out the greatest possible amount of and sculptor, as in the façades of the thought being bestowed on it, and this Certosa at Pavia, and countless other is one of the many great qualities with examples of the same period. In wood which all Mr. Gilbert's work seems to and metal, in plaster and marble, in be imbued. This application of thought

harmony between such work and the skill in the use of the figure, if the usual architecture is clearly felt; for characteristics of the best period of instance, look at the classic statuary in the early Renaissance are to be pre-

That the degraded state of sculpture accessories is very evident, and has In our conclusion we shall dwell on lately been curiously emphasized by what seems to be the remedy, namely, the work of Mr. Alfred Gilbert, A. R. a reduction of scale, a change of detail A., whose monument to Professor and feeling and a greater practicality Fawcett in Westminster Abbey contains as much thought and skill in a The Venus we want, if we must have few square feet as would once have one, is the "Venus of Botticelli," not sufficed to block up the whole wall of "of Canova," and the difference is the a cathedral with an unmeaning mass of measure of that influence of the early allegory. Allegory has been a grand Renaissance we wish to see in our snare to former sculptors, a veritable "Triumph of Allegory" has defaced The problem of the reconciliation of our cathedrals with monuments in the ideal products of the studio, with which our heroes play the smallest the conventions and limitations of our of minor parts along with Nephouses, and home life, is for the tune, Britannia and the other memthe still architectural treatment of the Throne Let us drive out the inane French with its niches and figures is contrasted

furniture and fittings lies the field for takes time and requires patience on the



HOME OFFICE, LONDON. SCULPTURE IN SPANDRILS BY ARMSTRONG.

part of the public; but what matters it strong's ability is also shown in the if the public do have to wait a year or Home Office, Whitehall, where his two longer for the Shaftesbury memo- vigorous spandrels give value to a rial at Piccadilly Circus; if, when it does not particularly significant arcade—his

joy forever.'

work of the day is one of the greatest needs of the present age. We want on the part of our artists a personal force, the work we shall allude to later on.

The co-operation of architect and sculptor is another most urgent need of our art to-day, and we now propose to glance to some recent instances more especially to illustrate the influence of early renaissance ideas on them both. In our mention of the Gothic Revival we have alluded to the small share that sculptors had in it, not but that much talk was then as now common on the subject among its professors, resulting, however, in little besides the Albert Memorial in Hyde Park.

In Sir Gilbert Scott's

notes on his own life he praises warmly ture and architecture together, on a the sculptor of much of the great basrelief frieze which forms the leading

feature of the design.

plain, with justice, of the sensational our notice of this sculptor's work vulgarity that characterizes the group by an illustration of a recumbent fig-

come, it is a "thing of beauty and a work, in fact, is characterized rather by vigor than grace, a fault, however, the The skill of using the past in the reverse of the usual failing of the ork of the day is one of the greatest English school. The two figures of Moses and St. Peter in the restored reredos of the Abbey are also by him, that fuses the elements we have to and show perhaps more clearly than deal with, and re-creates from them the Albert memorial, that his work has the work of art in its completeness and not too much Gothic feeling; the latter harmony. This power is what raised is, in fact, so Italian in character that such an artist as Alfred Stevens from the sculpture of that day accords suffithe ranks and enabled him to produce ciently well with it, while it may serve to show that any employment of sculp-



Asia. By Foley, R. A. From the Albert Memorial.

the work of Mr. H. H. Armstead, R. A., large scale, really involves a strong Renaissance bias.

It is a pity that the opportunity afforded by the Law Courts for testing We may take this to show that, so far this point was not availed of by Mr. as they were concerned, harmony Street, but it most be ascribed to the reigned, and the architect found ade- parsimony of the government that the quate support in carrying out his sculpture of that great building is so design. Of the groups at the angles, slight, consisting only of a few gable it is impossible to speak so favor- statues. Inside, however, in the great ably; undoubtedly the best is Asia, Gothic vaulted hall, Mr. Armstead has by Foley, R. A., which we give above, executed a cenotaph to Mr. Street, its and had he lived to complete the cen- architect, and how far it accords tral statue, the result would have been with the surroundings may be seen other than it is. Americans may comin the illustration. We shall close representing their continent. Mr. Arm- ure for a tomb which has another inment, mostly in favor, in our day, for seem to feel the want of greater freesuch memorials; the undoubted gain dom and scale on the side of the sculpin reverence over the memorials of the tor. We believe we shall carry with preceding age will not be disputed, us all lovers of Italian art when we though it is surely by no means the last assert that however great the defects

the Glasgow Town Hall errs perhaps to predominance on the part of the by the novel fault of using too much sculptor's art. Imagine, for instance, sculpture, if such be possible, at least such a sculptor as Alfred Stevens sharit has been said that the interest of the ing in this work at St. Paul's, and we building is on that side. Other recent shall see at once how inadequate is the works have not certainly that failing; mere carving of the present reredos in the Birmingham Law Courts façade has comparison with the figure work that in the gables some good modeling in would have taken its place. We say terra-cotta, which, indeed, seems the this, not wishing to depreciate the very material for the modern sculptor, merit of the actual work, but rather as his own work can be rendered lamenting the boundaries imposed by durable, without the translation into the architectural scheme. At any disstone or marble by another man. It tance the panel work is lost, in spite of is to be hoped that the same archithe questionable device of colored tect will give us in the new backgrounds, which, in regard to the buildings of the ton Museum, a of its possibilities. One of the com- concurrence of the architects, Messrs. petitors for that building, Mr. John Bodley and Garner. Belcher, showed a band of most graceful figures along the front, appar- at Venice, perhaps the finest of late ently designed by a sculptor, in fact a Italian examples, with other and even group representing Science, by Mr. bolder instances of united architecture Thornycroft, R. A., adorning the new and sculpture will readily occur to our architect. Another work, illustrated in later work. THE ARCHITECTURAL RECORD, was Mr. they realize that he is engaged on the sculpture of the Imperial Institute. Manufacture on the other.

between sculptor and architect.

perhaps the finest chance for com- bronze, and belongs to the same class as

terest in that this is the style of monu- bined work. In this instance we word of sculpture for Christian tombs. of Italian and Spanish reredos they, Among important modern buildings, at any rate, are right in the tendency South Kensing- black painting of the main pilasters, is good example now about to be removed, with the

The reredos of S. Giovanni e Paolo, building for the Institute of Account- readers, and the use of the more refined ants, in London, has been illustrated in detail of the cinquecentist need not this journal, Mr. Belcher being the surely deprive us of the scale of the

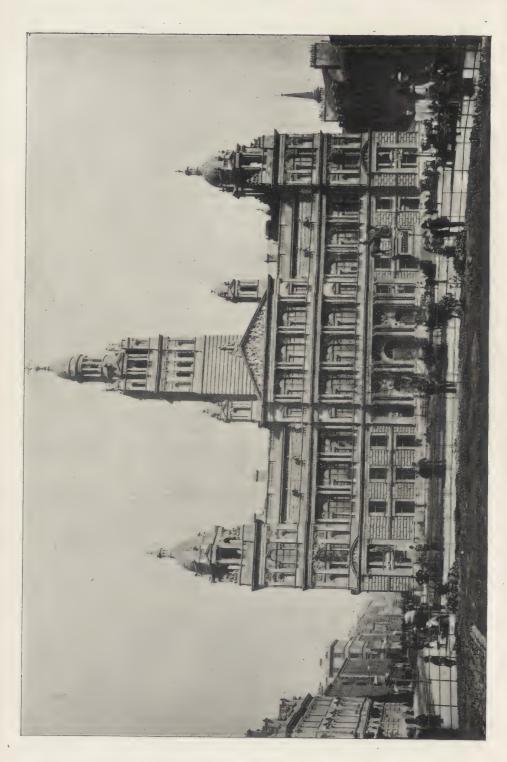
The Wellington Monument, by Alfred Pegram's Sibylla Fatidica, and our Stevens, in St. Paul's (see page 436) readers will turn to it with interest when illustrates our argument; the miserable mistake of the position of this masterpiece prevents any adequate This last named Early Renaissance and photograph or view being obtained, the very modern building is now very views, however, enable me to show familiar to art students and is approach- what folly it is to place such a work in ing completion. Mr. Pegram's work is a narrow and contracted chapel, instead principally in the main porch, a large of below one of the main arcades to figure of Navigation represented by a the nave, the position for which it was female figure seated on a Bench cor- designed. Surely it is not too much to responds on the return jamb of one hope that, as the fame of the artist inside to a similar figure representing creases with each succeeding generation, the wider appreciation of his mas-It is too early yet to judge of the terpiece will cause a successful moveresults of this instance of co-operation ment in favor of placing it in the true position, where it will form one of the Since the Albert Memorial, the rere- glories of the Cathedral. It will be seen dos of St. Paul's Cathedral has been that the tomb consists of marble and

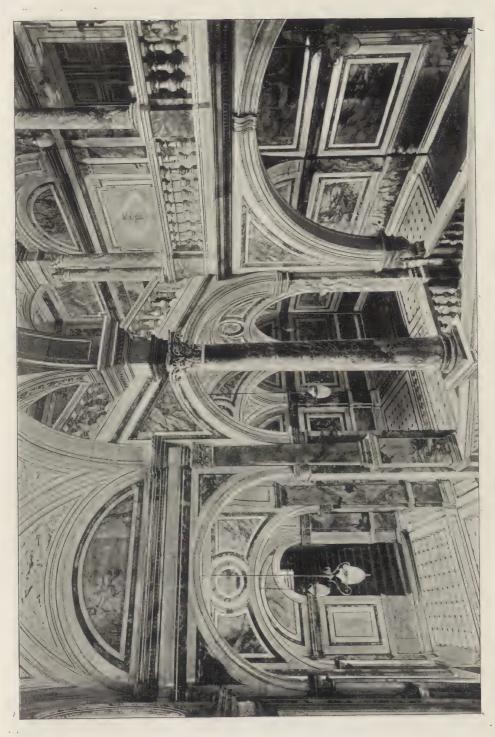


THE WELLINGTON MONUMENT, ST. PAUL'S CATHEDRAL, LONDON.

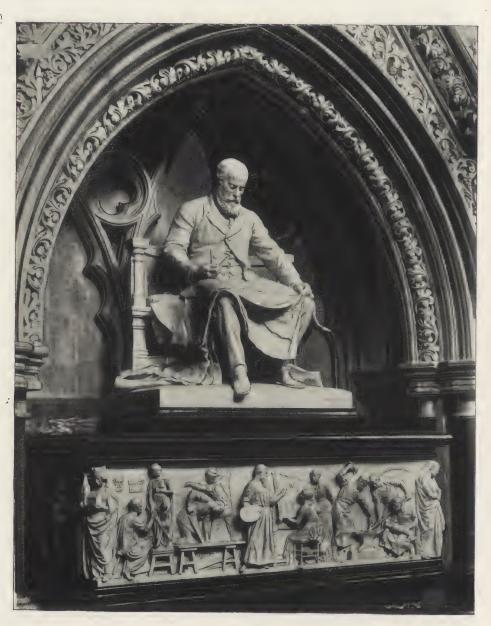


THE REREDOS, ST. PAUL'S CATHEDRAL.





Vol. II -4.-4.



CENOTAPH TO STREET, BY ARMSTEAD, IN THE LAW COURTS, LONDON.

the Jacobean tomb described and illus- great period trated before.* Where it differs is in he touched the masterly combination of sculpture style in harmony with itself. scale with the architecture. the latest Italian altar pieces, where the sculpture and architecture is of a

debased type.

It is also analagous with the grand Italian Tombs of the middle ages and of the Renaissance, as at Verona and over cowardice, shown in our view, and Lying at the corresponding end, on mannerists. detail, the want of which has so often the ivy. been alluded to in former work, cannot be too highly praised. The crowning of the monument remains uncast, on the summit of his own Tomb. It union of sculpture and architecture. is now proposed to cast this crowning statue so that the monument been manifested by some sculptors, who when moved may be seen in all its per- have protested their desire to work fection in its true position beneath the with architects, in the adorning of their nave arcade. We regret that we are buildings, we may fairly ascribe to the artist, but photographers in England The school of Bernini has yielded to are nearly all concerned only in what that of Donatello, and sculptors like the public, understood in the narrowest sense, will buy, but we would refer our readers to two books of Alfred Stevens' work, the first by Mr. Armstrong, entitled, "Alfred Stevens, a Biographical Study," and of the later one, a splendid under the auspices of Mr. Hugh Stannus, it must suffice to say that nothing was too common for his art to touch, whether metal stoves, tile floors or china dishes, all were made to bear the stamp of his Like an artist of the personality.

The independent system of study pursued by Stevens, living by himself long years in Italy, in itself a training thanks to a foolish joke by a former far different to the atmosphere of art Dean to whose ignorance of art, even schools, raised him above that false in England, it appeared a strange thing pride which has existed too long in the that a man should be on horseback minds of sculptors on the subject of the

That a different feeling has of late unable to illustrate other works of this influence of the Early Renaissance. Desiderio and Nuno and others of the great fifteenth century are now honored to an extent that the last generation would have deemed incredible.

The growing wealth and costliness of modern building enterprise render folio produced by the autotype process feasible an elaboration of detail of the highest class, that formerly would have been deemed impossible, except in such extreme instances as the Houses of Parliament, in which case, however, the architect had to support many grievous reproaches on this very account.

Moreover, the interiors of such modern buildings, their furniture and fittings, afford equally good fields for sculptural display of far greater art

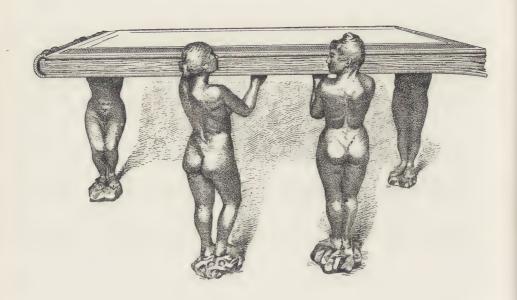
in Italy, all he adorned 111 His inof the highest class and on the largest fluence may be traced in the terra This cotta and faïence detail employed in feature lifts the whole work at once far the present South Kensington Museum above these monuments, and also above buildings where his pupil, Mr. Moody, was employed, and other buildings have owed much to his example. Little appreciated by the many in his own age, Stevens runs the risk now of that false praise of which imitation is in art, the expression. He is best praised and best Venice, but it is unique in possessing followed by students who study as he ideal groups as the Valour triumphing did. Imitation of his personal manner will be as fatal as that of Michael the Truth pulling out the tongue of Angelo was upon his followers and Mediocrity is only too such a scale and in such a magnificent ready to shelter itself beneath the great form. The peaceful calm of the Duke name of a master—growing like the himself on his finely treated bier ivy, it obscures for a time the qualiwill also deserve attention, and that ties of that which it clings to, and general unity and appropriateness of leads the ignorant to deny the tree for

^{*} Even while I write the movement has now happily begun, having been started by a letter of Sir Frederic Leighton to the "Times," and is likely to be brought to a successful conclusion.

lost.

value than the independent pedestal revival, that reformation of architectstatuary of the past age when the les-sons of Greek work were misunder-let us therefore hope that the grand stood and the union of architecture lessons of the third great period of art, and sculpture, so perfectly exempli- the early Renaissance, will not pass fied in the Parthenon remained un- unheeded, but that English architects imitated, and the path of sculpture was and sculptors, in union, may press on to scale these heights of art which have Nor, as we said above, did the Gothic yet to be reached by the human race.

Banister Fletcher, Fr. A. R. I. B. A.





TOWER OF "MAIL AND EXPRESS" BUILDING.



Chicago, III.

WOMAN'S TEMPLE.

Burnham & Root, Architects.



Buffalo, N. Y.

ERIE COUNTY SAVINGS BANK.

George B. Post, Architect.

SOME PRACTICAL LIMITING CONDITIONS IN THE DESIGN OF THE MODERN OFFICE BUILDING.



stories, that the condi- the problem. tions of our present busierect in all centres of

population where the fever of money getting is permitted to have full swing, unhampered by any traditions that involve avoidable loss of time.

Whether this building is so high by sistent with true economy. reason of the desire of men of all callings to come as close to a given centre as possible, to the desire of men of similar callings to be as close together pay interest on the total amount of alone, which comprise the balance. At

HIS term, "modern office money invested, might be discussed at building," is used to considerable length, but is foreign to describe the mammoth the present subject except in so far as structure, of many it furnishes one of the limitations of

The elements that must be combined ness life require us to in the successful building are:

- (a) Ease of access.
- (b) Good light.
- (c) Good service.
- (d) Pleasing environment and approaches. (e) The maximum of rentable area con-
 - (f) Ease of rearrangement to suit tenants.
- (g) Minimum of cost consistent with true economy.

These may also be separated into as possible, is due to the superior service two classes, those that particularly that can be rendered for the same outlay, interest the tenant, which are the first or is due to the necessity to procure four; and those that interest both enough rentable space to be able to tenant and landlord, or the landlord two interests were antagonistic, but a requires a guide book to call attention little thought will show that if the land- to it is of but little value and its cost lord sacrifices the tenant's interest he had better be saved or placed elsewill in some ratio affect his own by where. reducing the value of the space he has to rent; on the other hand he may offices and court is discussed, and it is sacrifice his own interests in a way that there shown that the elevators should will render it difficult to secure a proper be so placed as to bring them about return, by unnecessarily wide halls for equidistant from the extreme offices; example, and it is to establish a proper this is so, even when it makes a little

that the following is offered.

First then, we would state that the the cars, their speed, size, capacity, etc. elevators must be placed so as to be located so as to front on two streets of must be remembered. equal importance and is very high, and From the notes it was found that consulted really. To put this in another Now, independent observation

first sight it might seem as though the way, the time-saving device that

Further on the arrangement of the relation between these various elements walk for every one entering the building. Of course it would save for the (a) Ease of access.—This can be had average travel of the person entereither with a low or a high building, of ing the building to have the elevators which the latter only interests us. With near the front, but it would involve the floors placed one above the other it the sacrifice of very valuable room, is necessary that they be reached by and if a tenant wanted an unusually elevators, and the solution of the prob- large area, it would make it very hard lem depends on them almost entirely. to accommodate him. Third, we have

To determine these points practireached directly from the street and only cally, observations were made for the a few steps above or below the level of writer by one of his assistants of the sidewalk. This rule holds true no twenty of the better class of office matter what the character of the prin- buildings in the lower part of New cipal offices. Occasionally it will be York City, taking notes as to the noticed that some large financial instinumber of stories served, number of tution erects a building for itself with elevators, number of offices, interval about two-thirds of its space rented in between trips, working speed, size of offices, and for effect a very fine car and number of passengers, and an entrance will be made with impos- attempt was made to reduce the results ing steps up to a platform several feet to some uniform law. It will be seen above the street, requiring every per- at once that this is very difficult, as the son entering the building to climb up service in each building depends upon before beginning the trip in the eleva- the class of tenants. What would be tor. Second, we would state that all of good for one kind would be intolerably the elevators should be grouped together slow for another, and in the application unless the building is very long, is of the following rules this condition

as a corollary of this, all of the eleva- those buildings that gave the imprestors should be so placed as to be readily sion of a good service, had a car-interseen by a person standing in the middle valranging from thirty to forty seconds, of the space devoted to them, so that so that the condition of good service when he wants a car he can take the would be that the interval between the first. Instances of the violation of this trips should be such that in no case rule and the annoyances thus arising would it be necessary for a person to are no doubt fresh in the reader's mind. wait for a car longer than forty seconds. The rule is correct even where it would The next point was that the speed for seem to be desirable to have a double this service was about 400 feet per minset on the supposition that at least half ute, which would be 6.67 feet per secof the tenants would use one set while ond, or 1.87 seconds for the time rethe general public would use the other, quired to travel from floor to floor, on for the public who come to see the ten- the assumption that each story will ants are the ones who are to be most average 12 feet 6 inches between floors. shown that an elevator car travels from should be about 5x5 feet; this is for one-third to one-eighth of the time, ordinary service. For a building in which ber of offices on a floor, so that while ditional office until the car reaches a two elevators could easily accommodate size of 6x6 feet, beyond which it is stories, they could not do so if there cars should be increased. were but two stories, unless the size of the cars was very much increased. be in part determined by the character The time that the elevators are not of the building, the space at hand and running will thus be seen to fix the the like, but in general they should be number, as well as the size and the made so as to lift 2,500 lbs. live load at speed. If we assume that they run the full speed, should have the entire one-third of the time, we would have front readily removable, and should for the time for the round trip of a four- have the governing device in the corstory building, forty-five seconds. Prac- ner away from the door, so that when tically the interval is a little less where the front is removed the rope or wheel the travel is more than four stories, is out of the way. The controlling sufficient to make it forty seconds as an device should be a wheel, lever or switch,

number of offices on a floor and the of the car. The guides generally should number of stories have on the number be placed in the corners of the well. of elevators needed in a building, we This economizes space, although it is may note the case of one building of not quite so good for the construction seven stories and 240 offices that has its of the car. Where there is a reasonable tenants easily accommodated by two doubt as to the actual number of cars cars, while a building of twelve stories required, it would be well to make all of the time, the character of the use mum, and then only install the minimum being similar. As near as could be de- number that it is thought will do for the isfaction, and such a car, at a speed of necessary. Stairs are not mentioned in five offices well if they are placed on save in an emergency. more than two and less than six stories, (b) Good Light.—This is of the utto build on this width.

up to fourteen and six for all above convince many others. that number.

It has already been said that the cars is not of the slightest importance which

the time spent in traveling increasing there are more than twenty offices on a with the number of stories served and floor there should be added one square decreasing with the increase in the num- foot of area to the car for each ad-150 offices, if they were placed in eight not well to go, and then the number of

Other details of the elevators should the switch being much better, as it gives As an instance of the influence the more perfect command over the motion and 271 offices has four cars fully taxed ample provision for the probable maxitermined a car 5x5 feet gives good sat- service, putting in others later on if 450 feet per minute, will serve seventy- this connection as they are never used

and if the service is such as to give most importance and as is usual in such more than this number of offices to a cases there is a radical disagreement at car or a greater travel, the number of the very start as to the requirements. cars should be increased. Finally, it Some hold that only a north light is may be said that for a 25x100 feet truly good while others aver that no building two cars are needed for all building is well planned that is not services between four and fifteen so arranged that there is a little stories, and for a 50x100 feet building sun in each office during a part of the there should be two cars up to eight day, except perhaps in the lower stories. stories, three up to thirteen, and four Now the writer is one of the latter, up to twenty, and it is probable that and, if it were essential that the point four cars will provide for any additional should be settled, would be ready to number of stories that it is practicable discuss it to any length and could perhaps convince a goodly number of For a roox 100 feet building, we should those who were inclined to think so in have four cars up to ten stories, five the first place, but certainly would not

Fortunately for our present purpose it

shall speak of its coming into the rooms, the street, according to preference for and thus make a certain arrangement either north or south light, the elepreferable, if the plan were reversed, vators, stairs, etc., remaining in the it would still be desirable to keep the same place and the plan being simply axis in the same direction so as to get turned over. Refer to the figures 1-7

more of the north light.

proper direction for the axes of both ments. the building and the courts. In New

the hours of sunlight equally, and it is and must therefore be met in some way. this line that should be used for the the very bottom during at least a part in his way. of the year, and will go the maximum open to the south every office that gives on it will get a glimpse of the sun every day that it is visible at all.

way the light comes from since while we northeast or the southwest corner of given in the discussion of the point (e)The first point then is to get the for suggestions as to court arrange-

The light must be let into the offices York we generally have this already through windows, no matter where it determined by the subdivision of the comes from, and these must be made city into rectangular lots with the long ample. Requirement (f) makes it delines making an angle of about 211/2 sirable to use a unit for an office of degrees east of the meridian, but else- about 9x15 feet, and to properly light where and especially where it is pos- this unit requires a window at least 4 feet sible to make a selection, it should be wide and 6 feet high with the top not on a bearing of north 22 1/2 degrees more than I foot below the ceiling. The east, which agrees quite closely with the particular point to watch is that where New York layout. This will be evi- there are large arched openings the of-dent from an inspection of the figure, fices that come partly behind them in which for purposes of ready compre-shall have plenty of light, either by hension the sun is supposed to rise at openings at the sides or by piercing the the point VI. represent- spandril walls, or in some other way, as ing six A. M. and to set the volume of light from the top of the at the opposite end of window is of much greater lighting the diameter, then the value than that coming in at the floor. usual hours of business Under no circumstances should that will be as designated by part of a window that is below a point 20 the numbers IX, and V, inches above the floor count as a useful and the line which bisects part of the opening. This is a particuthe space between them larly hard condition to satisfy, it is adrepresents the axial line that divides mitted, but it is one that is unavoidable

The light in a room is also made axes of the building and of the courts. much more effective if there is a certain It will further be evident that if the amount of clear wall space on each side courts be made square or nearly so of the window, broken, in fact, only by they will be so proportioned as to the furniture. The ceiling should be throw the shadow of the south wall on hard finished, as this reflects much light the north wall at the highest point that down to the desks. For the same reait can reach and only the top of the son the aim should be to have all of the court will ever get direct light, while rooms rectangular and without breaks, if the court be made rectangular and alcoves or other similar construction, as with the long axis north and south, the they all take from the light and interlight at noon day will penetrate to fere with the tenant's use of the office

(c) Good service.—Apart from the use distance at all times. If the court is of the building after hours, janitor

^{*} It is the opinion of some of those who have made a study of the renting of office buildings that the future com-petition will be made on the question of light and air and The courts should be generally from 6 to 25 feet wide depending on the width of the lot and the size of the offices.

From this it would follow that the ideal location would be either on the

ing, to be considered.*

every floor for the accommodation of Connected with this question is the the tenants on that floor each toilet kindred one of whether to filter the should have one water-closet for every water supplied or not. If all of the five offices, one wash-basin supplied water has to be pumped to a house with hot and cold water for each two tank, it will probably pay to prowater-closets, but never less than one, vide for the introduction of a certain and one urinal for each two closets. small amount of alum as a coagulant In addition, there should be either a into the receiving tank and then pass small cesspool in the floor with a trap, the water for the house lines through a bell trap and strainer and draw cocks felt filter arranged so as to be washed placed on the supplies for the use of the down by the operation of a simple lever slop sink placed in a compartment This will add but a small amount to similar to the water-closet compart- the cost of the plant in the beginning, ment, supplied with both hot and cold and is an attraction to tenants If there on a floor their number may be reduced make an arrangement to have a cersmall gas stove; this room should connect through a lobby with the jandrain into a main drainage system of wrought iron, screw-jointed pipe with safe and needs no further comment. shouldered fittings, such as are put in by all of the good plumbers in the city, the pipe being hung preferably to the beams at the middle story so as to minimize the effect of expansion and contraction. This will add about 5 per cent to the cost of the work, but is

Heating and ventilation should go together and form a serious problem since cost and methods of construction will not permit of a complete indirect heating plant, and it is also probably the case that it would not be satisfactory to the tenants, while the cost of operation would be very great. places are not permissible since they will in almost every case prove to be an unmitigated nuisance, always coming in the wrong place, taking valuable room just where it is most needed and forming a serious item of cost when properly treated. They serve, however, to take some of the foul air from the offices and so do a little good to justify their existence. Probably the removal of the foul air can be suffic-

service, the necessity of securing the only way the plumbing can be elevator boys of some little intelli- made safe in a large, high building. gence and other similar matters that Each office must be provided with a are entirely within the control of the wash-basin, which may have either cold owner, there are the toilet arrange- water alone or both hot and cold, as ments, heating, lighting and ventilat- may be deemed best for the particular case, although it will not be advisable If the toilets should be placed on generally to supply more than cold. "scrubs," or there should be a regular that works all of the necessary valves. water and with a strainer placed in the is anywhere in the vicinity a refrigerwaste. If these fixtures are all grouped ating plant, it would probably pay to one-half, but in all buildings 50 x 100 tain small amount of brine circulated or more, there must be a wash-basin through a tank, in which would be and urinal on each floor. In the floor placed a coil of pipe from which the where the toilets for women are there water would be drawn as needed, givshould be placed a double number of ing cooled water during the summer. water-closets, and, if possible, sufficient If the building were very large, it room for a sofa and a connection for a would probably pay to put in a small plant, operated by an electric motor. If the remainder of the plumbing is up itor's rooms. The fixtures should all to the requirements of the New York Health Department, it will be perfectly

^{*}Here again there is a division of opinion, one side, and it the practical, office-renting one, holding that the top floor should be devoted, except perhaps a small part, to the living rooms of the janitor, the men's and women's toilets, while the other, the architects, usually advising that the toilets be placed on each floor and the janitor given quarters elsewhere. The writer has figured on both ways and finds but little difference in the space lost. If the toilets are grouped at one place only one-half the number of fixtures are required; but the space so saved must be given to the janitor. Then there must be provided a basin and two or three urinals on each floor. Figures 1 to 7 show the floors without toilets, and the estimates of cost in the tables are based on there being toilets on each floor with the accommodations determined upon in this article. upon in this article.

iently well accomplished by putting in certain architects to make these lights, them entirely.

set up. As soon as the air was of the the fixture easy for short people. proper temperature it would be main-

It goes without saying that, whether supply is not satisfactory either in pertinent to this article. cost or quality, then a gas engine (e) The maximum of rentable area con-plant should be installed, taking gas sistent with true economy.—This must be from it than could be done if the gas which it shall be carried into execution. were burned in burners directly for illumination. room should have at least five outlets, desirable that the various floors be made one in the centre for the chandelier, duplicates as far as possible, while for with all of its lights controlled by a some of the features it is a necessity. switch at the side of the entrance door, and four placed near the four corners elevator car according to principles al-

transoms over the hall doors and open- that are for desk lights, brackets, but ing the halls to the outer air at some it is inevitable that they will prove to convenient point where there will be no be in the way of at least 75 per cent of back draft into the halls. If it is pre- the tenants, besides which they interferred, moderate size ventilating pipes fere with condition (f). These outlets could be run to each of the offices, should be simply the junction box of being collected into a main stack run- the Interior Conduit and Insulation ning vertically through the building Company, with the rim flush with the and the circulation assisted by means plastering, and covered with a brass of a small fan run occasionally, simply cover carrying a hard rubber bushing to start the circulation. Exhaust fans and small male screw. Inside of the box have a way of taking their air along would be placed the fuses on a hard the lines of least resistance and that rubber base and the binding posts for makes it undesirable to depend on the connection of the fixture wires. From the outlets so arranged would be To introduce the needed air and to carried the twin wires for the light, terwarm it to the proper temperature it is minating either in a socket carrying a desirable to use a direct radiator with a shade or in a more elaborate fixture or box base, connected with the outer air in a desk fixture, the wires being drawn by means of a small galvanized iron over to the picture moulding and then pipe with a damper in it, so arranged down to the desk. If the wiring is as to open the base to the air in the done according to the rule of the New room as it closes it to the outer air. York Board of Underwriters, it will be Then in the morning when it is desired of sufficient size to supply ample light. to warm up quickly the damper would The central fixture should have four be closed to the outer air and the air lights for each office unit and might in the room would be warmed by the have a Greenfield switch in it for use in circulation which this radiator would the office, so as to make the reach to

Should lights be desired at any point tained at this point by the opening of intermediate between the ceiling outthe damper so as to admit the fresh lets, a small brass tube could be arouter air, warming it as it enters. Such ranged between the outlets and carried an arrangement is no novelty and has by them, on which the pendant could been found to be generally satisfactory. be traversed by hanging it to a ring.

(d) Pleasing environment and good there is a public supply available or approaches are both matters within the not, the building will be lighted control of the owner, subject to the primarly by electricity. If the public treatment of the artist, and are not

from the municipal supply, burning it considered in two parts; first, as to the in a gas engine, and getting more light plan, and second, as to the way in

First: The Plan.—There must be on There would be placed each floor the elevator-well, the halls, a single gas jet in each room for the the stairs and the toilets; each of scrub's use or for an emergency, but the these require a certain amount of space, lighting would be by electricity. Each and for economy of construction it is

Having decided on the size of the of the room. It is the practice with ready laid down, the well should be made one foot larger in each dimension would, therefore, be placed in a corner than the size of the car. It should or angle. be placed at or near the centre of the building, and, of course, must run all tenants that desire an entire floor, and

through plumb and true.

building to a certain extent, but for the removal of all of the partitions. the usual case of the 25x100 or 50x100 The size of the offices must be so feet building they must be made as arranged that the man who wants a small as possible. Then we would single office will get just sufficient make the hall on the ground floor while the man who wants more gets all as direct as possible from the street that there can be given on a floor to the elevators, and 8 feet wide, except a minimum space reserved in with a space in front of the eleva- the least desirable location for the tors of the size of the well. For the toilets and stairs. This subdivision upper floors, if the space be made 4 feet forces one into a column treatment wide in front of the cars and the halls of the façade, so as to get sufficient 3 feet 10 inches wide, it will be ample light for all of the offices, and also inif the trim is not too projecting, dicates a spacing of the columns in the the space in front of the cars being framing that is the most economical as joined to the side halls either by a a general rule.

sweep or straight.

they are made 2 feet 6 inches wide occasionally. that will be sufficient for all practical as possible.*

modation space as follows: For each to base an opinion, it is still probable that water-closet a space 2 feet 6 inches the limit is in the neighborhood of 16 wide and 3 feet 10 inches deep, for each feet deep in the clear, as beyond this urinal 2 feet wide and 3 feet deep and the light is rather bad, and the space for each wash-basin 2 feet 6 inches loses in value in consequence. This wide and 3 feet 6 inches deep, all as a consideration limits the useful size of a

minimum.

The toilets must be placed where they will either come on a light well or else be placed on an exterior wall and

It will be found that there are often to secure this the service should be The halls depend on the size of the placed where it will not interfere with

Such an arrangement gives oppor-For the stairs it should be kept in tunity to make the masonry piers of mind that they are for use only sufficient width to satisfy the sense of occasionally, and are in no sense proportion regardless of their height ornamental features that are indis- and introduces no greater difficulties pensable, except occasionally when into the solution of the problem than they are meant to lead up to grand were there before, nor will the design offices on the first floor above the of different office buildings possess street. Generally the money that they any greater similarity if so laid out cost could be spent to better advantage than they do now. In fact it would be in the enrichment of the entrance hall, well if the principles were so well Leaving the question open as far as understood that the owner could the special cases go it may be said that protect himself and the public from if through the balance of the building the novel, etc., solutions that one sees

The economical depth of an office purposes. They should be placed at must also be taken into account in the the end of the hall or at some other out- planning for, after a certain point is of-the-way place and be made as plain reached, no more money can be obtained for an office no matter what its depth. The toilets require for their accom- While there is but little data on which lot since it will be readily seen that there is a point where the extra size can only be used for court space or in uselessly increasing the size of the offices.

> Referring now to figures 1 to 7, we make practical application of these principles. They are intended primarily as suggestive of the plan, and would seem to be the logical outcome of the

^{*} In their layout the need to use the stairs as a hatch-way for the introduction of large or awkward articles of furniture should be kept in mind and the strings carried to the wall supporting the stairs, making the newels and rails low so that they shall be as little in the way as possible.



Fig. 1.-25 x 100 building on a corner. Office unit 9.9 x 19.0.

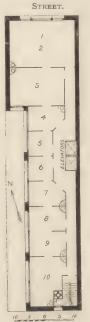


Fig. 2.—25 x 100 building in interior of block. Office unit 8.6 x 12.0.

STREET.

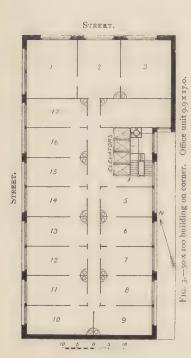


Fig. 4.-50 x 100 building in interior of block. Office unit 9.9 x 15.0,

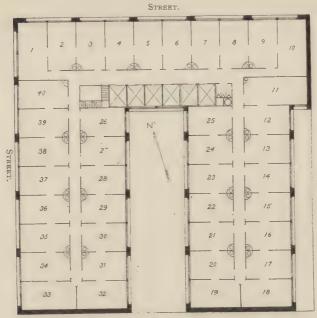
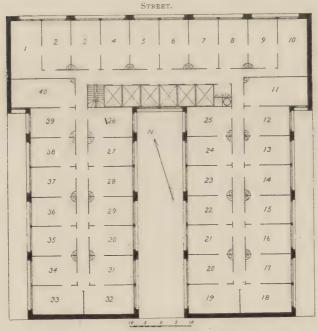


Fig. 5.-100 x 100 building on corner. Office unit 9.9 x 15.0.



 F_{1G} . 6.—100 x 100 building in interior of block. Office unit 9.9 x 15.0.

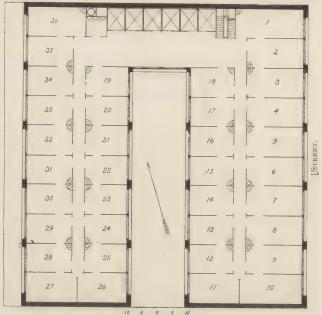


Fig. 7.—Alternative of Fig. 6. Office unit 9.9 x 15.0.

conditions assumed. In them the janitor's quarters they can be easily must be given its proper weight. arranged for there, and with the janispace they would occupy alone if scattered through the building.

No drawing is made for a 75x100 feet lot, as this size gives no advantage over the 50x100 feet size, except in giving ample light courts and permitoffices. If good light must be assured as suggested under heading (b), where speaking of the 50x100 feet lot, it would seem to be desirable to extend the frontage and widen the courts, as the additional light. These plans are for the average thickness of wall for a steel skeleton and would, of course, require a modification if they were made to conform to the requirements for masonry. This has not been done, as it will subsequently appear that the skeleton is the proper method to use.

Second: The method of construction. toilets needed, if there is to be accom- To put it in the form that it presents modation on each floor, are left out, itself to us would be to say, steel skelbut if they are decided upon they can eton versus masonry. The elements be readily arranged for. If they are that must decide, if we are to decide to be placed on the top floor with the intelligently, are numerous and each

We can build either all skeleton or tor's quarters will occupy about the all masonry; we can also, if we please, build a masonry wall carrying only itself, and then place columns behind it to carry the loads, but this does not seem to be the best construction since it wastes money, wastes space and will surely lead to some very ugly cracks ting of a slight enlargement of the that never can be closed. It may possess some advantages but they are not easily apparent. The better way would be to do all of either one thing or the other. Taking, then, for consideration the alternative, all masonry or all given in figures 3 and 4, so as to secure skeleton construction, we must consider that the masonry, if the walls are built of the thicknesses required by the New York laws, will take up more space than the steel walls, the amount being given in table I.,* for all walls from one

^{*}The various figures in the tables have been largely read from the slide rule and will not, therefore, be accurate in the last place, but are sufficiently so for all practical pur-

TABLE I.

DATA FOR COMPARISON OF BRICK AND STEEL SKELETON WALLS. BASED ON A LENGTH OF ONE FOOT.

STORIES.	Неіснт.	Are	EAS.	Cos	STS.	Excess of Cost.	INTEREST AT 8 %.	AREA SAVED.	RENT TO PAY IN-
		Brick.	Steel.	Brick.	Steel.	0. 000.	1		TEREST.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	12.5 25.0 37.5 50.0 62.5 75.0 87.5 100.0 112.5 125.0 137.5 150.0 162.5 175.0 187.5 200.0	1.00 2.00 3.00 5.00 6.00 8.67 11.67 14.67 17.33 20.00 23.00 26.00 29.33 32.67 36.33 40.00	1.00 2.00 3.00 4.00 5.33 6.67 8.00 9.33 11.00 12.67 14.33 16.00 18.00 20.00 22.00 24.00	\$4.00 8.00 12.00 19.00 24.00 34.68 46.68 58.68 69.32 80.00 92.00 104.00 117.32 130.68 145.32 160.00	\$6.25 14.80 25.70 40.50 58.00 78.68 103.30 130.52 160.75 193.73 229.92 268.95 321.15 357.25 406.90 459.35	\$2.25 6.80 13.70 21.50 34.00 44.00 56.62 71.84 91.43 113.73 137.92 164.95 203.83 226.57 261.58 299.35	\$1.72 2.72 3.52 4.53 5.75 7.31 9.10 11.03 13.20 16.31 18.13 20.93 23.95	1.00 0.67 2.00 3.67 5.34 6.33 7.33 8.67 10.00 11.33 12.67 14.33 16.00	1.15 1.24 1.28 1.32 1.43 1.43 1.46 1.50
17 18 19 20	212.5 225.0 237.5 250.0	43.67 47.33 51.33 55.33	26.33 28.67 31.33 34.00	174.68 189.32 204.32 221.32	515.77 571.66 633.32 697.00	341.09 382.34 429.00 475.68	27.29 30.59 34.32 38.05	17.34 18.66 20.00 21.33	1.57 1.64 1.71 1.77

Thickness of walls from the New York Building Laws.

Areas given are for the total number of floors set opposite them. The areas given in columns 3 and 4 are the total areas occupied by the walls on all of the floors, in square feet.

TABLE II.

BUILDING ON CORNER, 25x100.

									-:
WALL A	AREAS.	SERVICE.	TOTAL	NET A	AREAS.	Cost B	UILDING.	Cost	Lot.
Brick.	Steel.		TIREA.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
250	250	470	2,500	1,780	1,780	\$26,000	\$26,550	\$7,400	\$6,850
500	500	940	5,000	3,560	3,560	37,370	39,050	29,330	27,650
750	750	1,410	7,500	5,340	5,340	48,800	52,200	51,250	47,800
1,250	1,000	1,880	10,000	6,870	7,120	58,900	64,000	70,100	69,500
1,500	1,330	2,350	12,500	8,650	8,820	68,900	77,400	93,100	88,100
2,170	1,665	2,820	15,000	10,010	10,515	78,800	89,800	108,700	107,200
2,950	2,000	3,290	17,500	11,260	12,210	91,700	105,850	118,400	122,950
3,660	2,300	3,760	20,000	12,580	13,940	101,800	119,800	134,200	142,200
4,330	2,750	4,230	22,500	13,940	15,520	113,000	135,700	149,000	155,300
5,000	3,160	4,700	25,000	15,300	17,140	123,950	152,150	162,050	168,850
5,750	3,590	5,170	27,500	16,580	18,740	134,900	169,200	175,100	181,800
6,500	4,000	5,640	30,000	17,860	20,360	147,300	188,500	187,700	193,500
7,250	4,500	6,110	32,500	19,140	21,890	157,264	208,264	200,736	201,736
	Brick. 250 500 750 1,250 1,500 2,170 2,950 3,660 4,330 5,000 5,750 6,500	250 250 500 500 750 750 1,250 1,000 1,500 1,330 2,170 1,665 2,950 2,000 3,660 2,300 4,330 2,750 5,000 3,160 5,750 3,590 6,500 4,000	SERVICE. Brick. Steel. 250 250 470 500 500 940 750 750 1,410 1,250 1,000 1,880 1,500 1,330 2,350 2,170 1,665 2,820 2,950 2,000 3,290 3,660 2,300 3,760 4,330 2,750 4,230 5,000 3,160 4,700 5,750 3,590 5,170 6,500 4,000 5,640	Service. Total Area. Area.	Brick. Steel. SERVICE. TOTAL AREA. Brick. 250 250 470 2,500 1,780 500 750 750 1,410 7,500 5,340 1,250 1,000 1,880 10,000 6,870 1,500 1,330 2,350 12,500 8,650 2,170 1,665 2,820 15,000 10,010 2,950 2,000 3,290 17,500 11,260 3,660 2,300 3,760 20,000 12,580 4,330 2,750 4,230 22,500 13,940 5,000 3,160 4,700 25,000 15,300 5,750 3,590 5,170 27,500 15,300 5,5750 3,590 5,170 27,500 16,580 6,500 4,000 5,640 30,000 17,860	Service. Total Area Brick. Steel.	Service. Total Area. Brick. Steel. Brick. Brick.	Brick. Steel. Brick. Steel. Brick. Steel. 250 250 470 2,500 1,780 1,780 \$26,000 \$26,550 500 500 940 5,000 3,560 3,560 37,370 39,050 750 750 1,410 7,500 5,340 5,340 48,800 52,200 1,280 1,000 1,880 10,000 6,870 7,120 58,900 64,000 1,500 1,330 2,350 12,500 8,650 8,820 68,900 77,400 2,170 1,665 2,820 15,000 10,010 10,515 78,800 89,800 2,950 2,000 3,290 17,500 11,260 12,210 91,700 105,850 3,660 2,300 3,760 20,000 12,580 13,940 101,800 119,800 4,330 2,750 4,230 22,500 13,940 15,520 113,000 135,700 5,750 3,590 5,170 27,500 16,580 18,740 134,900 169,200 6,500 4,000 5,640 30,000 17,860 20,360 147,300 188,500	Brick Steel Brick Steel Brick Steel Brick Bric

TABLE III. BUILDING ON INTERIOR OF BLOCK, 25x100.

	····.									
MES.	WALL	AREAS.	SERVICE	Total	NET	AREA.	Cost B	UILDING.	Cost	Lot.
STORIES.	Brick.	Steel.	·	AREA.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
I	250	250	800	2,500	1,450	1,450	\$22,700	\$23,280	\$4,500	\$3,920
2	500	500	1,600	5,000	2,900	2,900	31,650	33,350	22,650	20,950
3	750	750	2,400	7,500	4,350	4,350	40,650	44,070	40,850	37,430
4	1,250	1,000	3,200	10,000	5,550	5,800	50,000	55,100	54,000	53,700
5	1,500	1,350	4,000	12,500	7,000	7,170	58,850	67,350	72,350	67,150
6	2,170	1,665	4,800	15,000	8,030	8,535	68,780	79,790	81,220	80,210
7	2,950	2,000	5,600	17,500	8,950	9,900	79,200	93,350	87,800	92,050
8	3,660	2,300	6,400	20,000	9,940	11,300	89,600	107,600	96,900	104,400
9	4,330	2,750	7,200	22,500	10,970	12,550	99,600	123,300	106.000	111,700
10	5,000	3,160	8,000	25,000	12,000	13,840	108,650	136,850	116,350	122,650
II	5,750	3,590	8,800	27,500	12,050	15,110	119,600	153,900	123,000	130,100
12	6,500	4,000	9,600	30,000	13,900	16,400	129,000	170,200	131,600	137,000
13	7,250	4,500	10,400	32,500	14,850	17,600	140,300	191,200	137,700	138,800
						1				,

TABLE IV. BUILDING ON CORNER, 50X100.

HES.	WALL	AREAS.	G	TOTAL	NET A	REAS	Cost B	UILDING.	Соѕт	Lot.
STORIES.	Brick.	Steel.	SERVICE.	AREA.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
6	2,601	2,001	5,550	30,000	21,850	22,450	\$131,100	\$144,300	\$276,900	\$276,700
7 8	3,40I 4,40I	2,400 2,799	6,475 7,400	35,000 40,000	25,125 28,200	26,125	152,400	169,300	318,600 354,600	318,700 363,100
9	5,199	3,300	8,325	45,000	31,775 34,750	33,375 36,950	199,000	216,500	396,000	408,500
II. I2		4,299 4,800	10,200	55,000	37,900	40,500	241,550 265.250	292,850 314,750	469,450 504,750	465,150
13	8,799 9,801	5,400	12,100	65,000	44,100	47,500	287,550	348,550	537,450	541,450 571,600
14,	11,899	6,600	14,000	75,000	49,100	54,400	338,650	416,950	581,350	603,050
16		7,200	15,000	80,000	53,000	57,800	364,600 388,500	453,600 490,700	628,400	630,400
18	14,199	8,601 9,399	17,000	95,000	58,800 61,600	64,400	412,700	527,550 566,450	687,300 714,350	677,450 703,550
20	16,599	10,200	19,000	100,000	64,400	70,800	463,350	606,350	743,650	721,650

TABLE V. BUILDING ON INTERIOR OF BLOCK, 50X100.

IES.	WALL	AREAS.		Total	NET .	AREA.	Cost B	UILDING.	Соѕт	Lot.
STORIES.	Brick.	Steel.	SERVICE.	AREA	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
6 7 8 9 10 11 12 13 14 15 16 17 18	2,601 3,401 4,401 5,199 6,000 6,900 7,800 8,799 9,801 11,899 12,000 13,101 14,199 15,399 16,599	2,001 2,400 2,799 3,300 3,801 4,299 4,800 5,400 6,000 6,600 7,200 7,899 8,601 9,399 10,200	8,400 7,800 11,200 12,600 14,000 15,430 16,860 18,290 19,720 21,150 22,650 24,150 25,650 27,150 28,650	30,000 35,000 40,000 45,000 50,000 60,000 65,000 75,000 75,000 80,000 85,000 90,000 95,000	19,000 21,800 24,400 27,200 30,000 32,670 35,340 37,910 40,480 41,950 45,350 47,750 50,150 52,450 54,750	19,600 22,800 29,100 32,200 35,270 41,310 44,280 47,250 51,050 52,950 55,750 58,450 61,150	\$119,200 139,450 154,430 181,850 203,450 223,000 245,800 266,500 293,200 314,300 338,450 361,650 384,600 408,100 431,650	\$132,400 156,350 175,900 209,350 237,150 264,300 327,500 361,700 392,600 427,450 463,850 499,400 538,900 574,650	\$236,800 268,550 262,570 328,150 359,550 390,010 416,200 443,500 466,800 470,700 511,550 535,350 555,400 573,900 593,350	\$234,600 270,650 311,100 335,650 366,850 397,700 422,700 447,500 468,300 494,400 328,550 536,150 545,600 567,350

TABLE VI. BUILDING ON CORNER, IOOXIOO.

IES.	WALL A	AREAS.		TOTAL	NET A	AREA.	Cost Bu	JILDING.	Соѕт	Lor.3
STORIES.	Brick.	Steel.	SERVICE	AREAS.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	21,600 23,600 25,500 27,700	4,320 5,050 5,940 6,840 7,700 8,640 9,720 10,800 11,860 12,950 14,150 15,500	29,500 32,450 35,400 38,350 41,300 44,250 47,200 50,150 53,100 56,050	60,000 70,000 80,000 100,000 110,000 120,000 140,000 150,000 170,000 180,000 190,000	81,030 86,150 91,200 96,250 101,400 106,250	39,700 45,080 51,350, 57,510 63,660 69,850, 75,960 81,930 87,900 93,890 99,850 105,700 111,400 117,050 122,650	242,550; 276,950; 311,750; 346,300; 389,200; 426,800; 462,350; 500,650; 546,400; 626,800; 668,200; 709,400	315,750 361,250 407,300 463,700 515,900 572,350 621,750 687,400 746,750 811,000 874,200 941,400	633,050 700,250 771,700 831,800 863,200 957,650 1,019,350 1,068,600 1,123,400	\$511,750 571,850 644,250 708,750 783,700 844,300 904,100 959,650 1,026,250 1,070,600 1,123,250 1,169,000 1,215,800 1,248,600 1,290,100

TABLE VII.

BUILDING IN INTERIOR OF BLOCK ALTERNATIVE FIG. 6.

WALL Brick,	Areas.	C	TOTAL	NET	AREA.	Cost B	UILDING.	Cost	Lor.
Brick.	Steel.	SERVICE	AREA.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
6 4,650 7 6,300 8 7 900 9 9,350 10 10.800 11 12,400 12 14,100 13 15,800 14 17,670 15 19,600 16 21,600 17 23,600 18 25,500 19 27,700 20 29,800		21,000 24,500 28,000 31,500 38,500 42,000 45,500 45,500 52,500 56,000 59,500 63,000 66,500 70,000	60,000 70,000 80,000 90,000 110,000 120,000 130,000 150,000 150,000 170,000 180,000 190,000	34,350 39,200 44,100 49,150 54,200 63,900 68,700 73,330 77,900 82,400 86,900 91,500 95,800	35,400 41,200 46,950 52,560 53,800 69,360 74,780 80,200 85,700 91,050 96,350 IOI,500 IOI,600 III,650	648,000	215,000 250,000 291,000 335,000 384,000 433,000 484,000 538,000 708,000 771,000 833,000 895,000 964,000	454,050 516,000 577,000 634,000 696,000 756,500 808,000 915,000 915,000 1,009,000 1,009,000 1,109,000 1,152,000	448,000 523,000 589,000 652,000 706,000 765,000 816,000 923,000 923,000 1,000,000 1,039,000 1,105,000

TABLE VIII.

BUILDING IN INTERIOR OF BLOCK ALTERNATIVE FIG. 7.

STORIES.	WALL	AREAS.	C	TOTAL	NET	AREA.	Cost B	UILDING.	Cost	Lot.
STO	Brick.	Steel.	Service	AREA.	Brick.	Steel.	Brick.	Steel.	Brick.	Steel.
10 11 12 13 14 15 16 17 18	5,000 6,750 8,550 IO,100 II,350 I5,100 I7,000 21,000 23,200 25,400 27,400 29,700	4,650 5,400 6,350 7,350 8,300 9,250 10,450 11,600 12,750 13,900 15,250 16,600 18,200	65,450	60,000 70,000 80,000 90,000 110,000 120,000 130,000 140,000 150,000 170,000 180,000 190,000	31,900 36,300 40,650 45,250, 49,900 54,300 58,700 62,950 67,100 71,250 75,200 79,150 83,300 87,150,91,000	33,050 38,400 43,800 49,000 59,650 64,550 69,500 74,500 89,300 94,100 98,650 103,300	\$189,950 219,200 251,500 283,600 319,800 354,350' 390,100 421,700 497,550 536,650 575,300 612,700 649,750 690,900	\$215,450 252,000 293,100 336,600 385,800 434,350 486,100 539,900 649,150 710,650 773,300 834,700 897,750 965,900	\$407,050 460,800 509,500 565,400 616,200 663,650 709,900 756,300 800,000 827,450 873,350 906,700 947,300 92,250 1,014,100	\$404,550 468,000 526,900 6825,200 762,100 807,000 838,850 871,350 897,700 927,300 952,250 972,100

TABLE IX.

PRICES PER SQUARE FOOT OF LOT CORRESPONDING TO PRICES GIVEN IN COLUMNS IO AND II, TABLES II. TO VIII.

50.0 x 100.0 Feet. 100.0 x 100.0 Feet.	CORNER. INTERIOR. CORNER. INTERIOR. INTERIOR. Fig. 7. Fig. 6. Fig. 7.	Brick. Steel. Brick. Steel. Brick. Steel. Brick. Steel. Brick.	\$55 40 \$55 34 \$47 36 \$46 92 \$49 75 \$5 17 \$45 40 \$44 80 \$40 71 53 72 53 74 53 11 54 13 56 74 57 18 51 60 52 30 46 08 72 92 72 62 58 51 62 22 63 31 64 42 57 70 58 90 50 95 70 50 81 70 65 63 67 13 70 17 77 77 78 37 69 60 70 60 61 62 93 89 93 38 20 77 17 78 37 69 60 70 60 61 62 93 88 70 88 70 89 50 95 76 95 96 96 96 96 96 96 96 96 96 96 96 96 96
		Steel. Brick.	
0 x 100.0 Feet.	INTERIOR Fig. 2.	Brick. S	8 1 2 3 2 8 8 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
25.0 × 10	CORNER. Fig. 1.	Steel.	27 74 72 75 75 75 75 75 75 75 75 75 75 75 75 75
	Cor	Brick.	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

EXPLANATION OF TABLES.

As an example of the use of the tables I. to IX., we will suppose the case of a lot 90x100 placed on a corner; then to determine the available floor space for any given number of stories, we would

refer to columns 3 and 4 of table I.

If we were thinking of a building ten stories high with brick masonry walls, we would multiply the perimeter of the building by 20, the number of square feet occupied in a ten-story building by a wall I foot long, and this would give us the total area occupied in the ten stories of the building, by the walls.

Similarly, if we multiply by 12.67, we would have the total area occupied by a steel skeleton

building.

Next, suppose that we desire to know which of these two buildings would be the least expensive to erect, columns 5 and 6 give the respective costs per lineal foot of wall of a brick building or a steel skeleton building.

Column 7 gives the excess of cost, one over the other—this amounts to \$113.73.

Now refer to column 9. It will be seen that the skeleton method saves 7.33 square feet over the

masonry method.

If then we can rent this 7.33 square feet at \$1.24 per square foot, which is taken from column 10, we will pay interest at 8 per cent on the additional cost of the steel skeleton wall; and if our rents are \$1.25 per square foot, or more, it will be better economy to build the steel skeleton than to build the masonry wall.

Column 10 of table I. also shows that an eight-story building with a steel skeleton frame is the most economical considered only in the light of what it costs to gain the additional floor space; if

we can rent that floor space for \$1.07 it will pay interest on the additional cost.

Continuing the example of the 90x100 lot, if it should be desired to determine what could be done with it, refer to table VI.

The areas occupied by the wall given in columns 1 and 2 will be almost the same.

If an exact figure is desired, it can be obtained by the use of column 3 and 4 of table I. The area occupied by the service will be precisely the same, except that the end of the hall will

be cut off.

The net area will be reduced by 4 office units or 600 square feet per story. Then we would subtract these areas from the net areas given in column 6 or 7 for the actual net area of the building, multiplying by the rental per square foot determined on as a proper amount, would give the gross return per annum from the building. Capitalizing this at 8 per cent would give the amount of the total investment which is possible under the circumstances. This total investment includes the cost of the building as given in columns 8 and 9, and must further include interest on the investment for one year of amounts paid for architects and other commissions, purchasing of leases, tearing down of old buildings, and such other matters not properly included in the cost of a building.

These values are given in columns 10 and 11 for the different regular size lots. This limitation usually amounts to in the neighborhood of 10 per cent on the total investment, and should be very

carefully observed.

Table IX is used as follows: Suppose that a man should offer a lot 50x100 for \$300,000 on the interior of a block. Referring to table IX, columns 8 and 9, it will be seen that the building must be eight stories or more in height, since the allowable price per square foot does not reach \$60.00 per square foot, which is the price of the lot per square foot based on \$300,000 until eight stories have been

reached, for a steel skeleton building

Similarly, if the offer was for a lot of 50x100 at \$1,000,000 it would be necessary to increase the rental price per square foot up to \$2.00, to put the building on the corner, and build in steel skeleton, in order to be able to pay 8 per cent, inasmuch as the highest price that can be paid per square foot for a lot 50x100 on a corner is \$148.73, when the rents are \$1.50 per square foot, and the owner is satisfied with a gross 8 per cent return.

lot we must have some bracing, and tively so. we have the actual cost of the two meth- obtained the cost of the building. ods when we place the interest of the area obtained by multiplying the East they will be found to be ample. area of lot by the number of stories,

foot for purposes of comparison.

by multiplying the net rentable area in cost and decrease in space. ing the gross income. etc. Of course, when the lot cost is any desired number of changes. actually less, there will be a corresponding greater profit.

twenty stories if they average \$1.77.

too much pierced it might be safe to but there is a limit beyond which it is

to twenty stories in height. Then, if build with such bracing as could be had the building is placed on a very narrow in masonry, but it would not be posi-

the masonry walls do not readily lend Should the rentable value be greater themselves to this. No doubt it could or less than that shown, a new value be done, but it is probable that it for the lots can be found by multiplywould be far from a satisfactory piece ing the net area for the number of of work and would probably lead to stories given, dividing the result by 0.08 serious trouble in the future. Finally, and subtracting from the amount so

The costs as given are the result of a added cost of the skeleton method careful analysis of the costs of the against the lost space of the masonry buildings made in detail for each buildmethod. This has been carried out ing and are based on New York prices; to a legitimate conclusion for the they include everything needed to fit the several sizes of buildings and for the building for occupation, including fixvarious heights in Tables II. to VIII., tures, mechanical plans, etc., complete; in which are given the areas occupied they will be found to be close enough by the walls, the halls, elevators, to require care to reach them, and do a toilets and service generally, under thoroughly first-class piece of work in the heading of service: The total New York, while for other cities in the

It must be kept in mind that to acthe net area, the cost of the building complish these results, the space deand the maximum cost of the lot for voted to service must be laid out both brick and steel buildings of vari- according to the principles already ous sizes of lot and varying heights. given, that the construction should In table IX. the lot costs have all follow the limitations given under headbeen reduced to a price per square ing (g), and that if there are to be spacious halls, monumental stairways, This maximum lot cost is obtained etc., there will also be a grand increase

by \$1.50—assumed to be a fair aver- (f) Ease of re-arrangement. — This age rentable value for the space, giv- is one of the items of cost that rarely This was enters into the preliminary estimates capitalized at 8 per cent on the as-sumption that 3 per cent would easily the offices are laid out as advised much cover all expenses for service, main- of this trouble will be avoided and if tainance, etc., leaving 5 per cent as the partitions are made with corrugated the net income. From the capital iron lath, plastered on both sides with account so obtained the cost of the rock plaster and stiffened by being building was deducted, leaving the secured to small I beams, they can be balance as the maximum amount that shifted around at will with a minimum can be spent for the lot, plus interest of cost. All of the other constructions cost for one year, fees, buying leases, will remain undisturbed and ready for

(g) Minimum of cost consistent with economy.—It would be probably well Table I. shows under what condi- to again call attention to the tables II. tions of rental value it is profitable to VIII. and to their lesson, that there to build the skeleton, viz., between are certain lots that, taken alone, cannot six and seventeen stories when the probably be made to pay interest on rents are \$1.50 per square foot, as the cost of any building and the value assumed, and between four and of the lot no matter what the building be. This would not be so were we free If the front and rear walls are not to go to any height with the building,

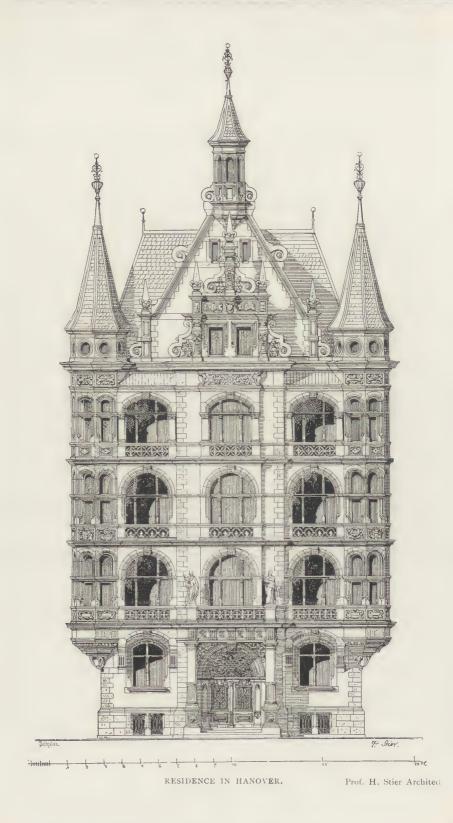
not safe to go, and it it seems to be the times the width would be the safe limit proper place to speak of it here. Every to carry the height, where proper regard tall building is at times subjected to was had to the wind bracing. wind pressures, tending to blow it down. We may say that this is a remote which we can make our own selection, evil, but that it is a real one is too evidepending on the circumstances of the dent to be denied. The wind acts character of the adjoining buildings, against the building in a horizontal character of the soil and the other condirection, so that the building may be ditions of the environment. If the adconsidered as being in the same condi- joining structure was to be some old tion as a beam fixed at one end, with small building, certain to be replaced the other end free and uniformly in the course of a few years, it might loaded. If this were the case actually be permissible to go one or two stories with a beam, we should make the depth higher and watch the bracing when the of the beam such that it would deflect intermediate building was torn down less than the amount necessary to to see that it was of sufficient stiffness crack plaster. If the beam were sup- to resist the wind thrust, while if it ported at both ends this depth would were similar in character to the new be one-twentieth of the span, and being one and equally well braced it would free, the effect of the load would be in- be probably safe to go to the maximum creased four times. Finally, we know that limit given. the length under these two conditions to
In this connection the limit in the secure the same deflection must bear methods of construction imposed by the relation one to the other of 0.57 to the bracing must be observed even 1.00. If then we have an office build- when it increases the cost of the building 25 feet wide and should make the ing by the use of the steel type when depth one-twentieth of the span, the the height goes beyond the economical building would be 500 feet high, and limit for this construction. reducing this in the ratio above given
It will then be apparent that when makes the height 285 feet. If we had the space rents for \$1.50 per square this height and the wall were pressed foot, a masonry building pays up to against to the predetermined amount about six stories, and beyond that it is we should have a deflection of 8 to 9 necessary to build in steel. Since it is inches, which would throw the centre of always desired to build to make the gravity of the wall beyond the outer maximum possible return, we can treat edge of the wall, if the building were the building as of a skeleton type, and eight stories high, and would bring it enumerate the proper materials to use dangerously close, no matter what the to meet the final conditions. It should number of stories. Keeping this con- be said that the estimates heretofore dition in mind, it is probable that the given are based on these materials, and maximum limit beyond which the de- the deductions therefrom will be varied flection would be unpleasant, would be slightly if the material change. It from $2\frac{1}{2}$ to 3 inches, and this would should also be said that only a firstgive the height as from 71 to 95 feet, class piece of work is contemplated, this according fairly well with the cur- and not such as could be put up by a rent practice. If we work on the speculator in order to fill the building assumption that the building is anala- with tenants and then sell out to some gous to a beam with one end fixed and easily gulled outsider. the other end free, and make its length one-fourth as great as we would if it is, in some cases opportunity for a were supported at both ends, we should choice yet it will be found to be much have the depth to the length about as more restricted than is generally sup-1 to 5, or the height would be made 125 posed, and there are certain points in limit, as above found, and if the build- attempted to give reasons but simply ings were free standing, there is but lit- to indicate what experience and good tle doubt that between four and five practice have shown to be necessary.

This then gives us limits within

In the choice of material, while there This slightly exceeds the upper which there is none. It will not be



Chicago, Ill.





columns, girders, beams, etc., using the effecting a small economy in cost. usual commercial shapes. The various parts should be rivetted together and either a marble mosaic or else a granothe column connections so made as to lithic laid with a marble border, there maintain the full strength of the being a small difference in favor of the column.

brick and terra cotta fronts and common brick backing for the facades, with left untreated, but of course mill-dressed the stories forming the basement of stone if desired, although this requires a judicious selection of the stone. The ter, hard finish, with the plaster carried rear walls should be made with com- into all jambs and reveals, with the mon brick and the courts either lined corners rounded off, and a small cove at with enamel brick and with the beds the ceiling, say of 6-inch radius. and builds made flat, which would partitions should be made of a rock plasbe the case wherever the courts ter, put on corrugated iron lathing supare internal ones, or else painted ported at intervals of about 3 feet by three coats of paint finishing with means of small channels or I's secured one coat of enamel paint. from the backing, should have every can be easily removed, and should be brick anchored with a Morse wall tie somewhat cheaper than the ordinary as often as the courses fall even. The 4-inch blocks. inner faces of the walls that are exposed to the weather should be furred, filled, hard oiled and rubbed to an using the usual two-inch furring blocks, eggshell finish, the base being made the usual hollow bricks of Haverstraw about 1 1/4 x8 inches and the architraves size having proved to be a delusion so far as excluding moisture goes.

the new Manhattan type, either having proved to be good. The blocks, if used, of the beams so as to require the miniunder flooring. The columns should mer is seldom of any great use. be fire-proofed either by the use of slabs column should be outlined with small erence being for the wire lath and plas-Every portion of the frame should the framing is carefully laid out the lipped urinal with the "Parsons skew backs or the Manhattan arches al tank. The water-closets should be

The frame should be of mild steel, without the hung ceiling below, thus

The flooring in the halls should be granolithic. The toilets should be sim-The walls should be made with buff ilarly treated. In the offices the flooring should be of Georgia yellow pine and carefully laid.

The plastering should be a rock plas-The to the floor arches above and below. facing brick, where of a different size These partitions are but 2 inches thick,

The trim should be of white oak, about 4 inches wide over all, with a backing and back mold carried down The fireproofing may be either of the to the floor, affording something for the hollow flat arches familiar to all, or of base to stop against and mitreing around all openings. The window trim would be similar in character, with the should be so used as to fill up nearly inner moulding carried around across the entire space between the flanges the top of the base and under the stool cap, so as to form a small panel under mum of filling, and the pipes and wires the sill. Chair rails and picture mouldrun in shallow channels run in the ings are matters of choice, and the for-

The halls should have either a Keene's of fire clay, each slab securely wired to cement or Mycenian marble wainscot, the others in the course, or else the with marble base and cement cap; or the rock plaster can be run for a cap L's and wire lath stretched over and and a marble base put in, and then the plastered thoroughly, the writer's pref- space between painted with an enamel paint.

The toilets should have the waterbe so treated, including the columns closet partitions made of oak carried that are so laid out as to aid in the wind about 10 inches above the floor on brass bracing and especially covering all legs, the urinal stall should be made of columns that are inclosed in stone. If marble and the urinals either the longbeams will so come that it will be prac-flushing tanks for each stack, or else ticable to show them, using either high Mott's "Shanks" patent with individu-



PRUDENTIAL LIFE INSURANCE COMPANY'S BUILDING.

wooden rim carried on brass brackets, lights of galvanized iron, and the baland a copper-lined wood cistern. The ance of the work to correspond. wash-basins should be oval with the shut-off cocks for each one.

be the New patent, the glazing of poldesire to pursue it further will find the ished plate glass; the painting should general principles of the constructive be of the most thorough order, using part fully treated in the writer's book, applying while freshly mixed, the re- book the writer now has in preparation maining painting being of first-class on this subject.

either a washout closet or else a ped- lead and oil paints in four coats. Leadestal hopper with the seat simply a ers and flashing all of copper, sky-

It is of course impracticable in a patent overflow and half S traps close single article to cover all of the ground, under the fixture with the supply pipes giving reasons for many of the stateplaced close under the slab and with ments made and going into the detail that would be desirable for a complete Miscellaneous.—The roofing should treatise on the subject. Those who for the first coats of all metal work a "Office Help for Architects," now appaint made by mixing 18 lbs. of red pearing in the American Architect, and lead with 5 lbs. of raw linseed oil and the details will be fully treated in a

George Hill.





CHICAGO ATHLETIC ASSOCIATION BUILDING.

Michigan avenue, Chicago, Ill.

H. Ives Cobb, Architect.



ARCHITECTURAL ABERRATIONS.*

No. 7.—THE FAGIN BUILDING, ST. LOUIS.



Philadelphia he

of architecture in existence, in the Record building. It may be worth while to reverse Matthew Arnold's maxim and in that has been done in the world, but one is always prone to puff himself up with the belief that he knows it when in fact he does not. We have already dealt in this series with the Record building and we shall not be suspected of entertaining any mawkish tenderness for that structure. But if the sculptor we have quoted had been confronted, just after delivering his judgment with the Fagin building of St. Louis, how would he have deplored his temerity!

"Ah! where shall we go then for pastime, If the worst that can be has been done."

It may be apprehended that there Philadelphian architecture, even though the Record building "has been done,"

eminent sculptor and perhaps some future architect of has been heard, St. Louis may exceed the absurdity of home returning the Fagin building. We cannot say from Philadelphia, that it is the worst that can be, but can soothly to swear anybody indicate anything quite so that it was some- bad that has been? If so, he will conthing to have seen fer a favor by sending a photograph of the worst in any the object in question to join the colleckind, and that in tion of yet unpublished aberrations.

In such a structure as this (if there had seen the ex- be on the whole planet another such) actly worst piece the psychological problem early arises: What can have been in the man's mind when he did it? What did he think he thought? An architect in Baltimore. the interest of culture to know the worst upon whose work we had occasion to comment not long ago, delivered himself into our hand, though we refrained from administering further justice upon him, with the defense that it was necessary to make a commercial building conspicuous and to arrest the attention of the passer. This intention to "collar the eye" is visible in all the aberrations of our architecture. Whether it proceed from personal vanity on the part of the designer or from deference to the requirements of his clients, it is essentially a vulgar motive and cannot have other than a vulgar result. When complicated with ignorance sufficiently dense, or with will be a good deal of fun hereafter in unsoundness of mind, it produces architectural aberrations. It is plain enough that the designer of the Fagin

^{*} We are making a collection of "Aberrations," and shall present one to our readers in each number of THE ARCHITECTURAL RECORD.



THE FAGIN BUILDING, ST. LOUIS, MO,

building meant to make people look at cannot possibly frighten anybody. In mitigate his misfortunes and make is "staggering drunk." The apparent

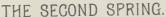
An architect, if for his sins he had to design a front with such a proportion of voids to solids, would have made his basement as solid as possible, have tied his front together with emphatic horizontal lines, and have tried for an expression of lightness and grace, an expression of mass and solidity being out of the question. The designer of the Fagin building, instead of dissembling the unfortunate weakness and tenuity of his supports, has called attention to it by every means in his power. He has projected them from them with a single horizontal band from the sidewalk to the roof, he has diminished them into shafts at the bottom and left them as boulders above, and he has treated them with the utmost rudeness, as if rudeness and vigor were the same thing, and slovenliness, profanity and profuse expectoration signs of force of The comparison is not character. columns is analogous to going about in one's shirt sleeves and with unblackmentary decencies, and such a disreas of impudent rowdyism.

It does not attain its purpose, for it building.

his work, and so far he has been suc- fact, all the efforts to make it look vigcessful. Nobody but a blind man who orous betray and enhance its pitiable should pass it could possibly escape it. weakness. Six completely independent But there is novelty in the method by piers, running through from top to botwhich he has sought his result. Ap- tom, divide the front into five vertical parently his notion was, after sacrific-slices, none borrowing any strength ing to practicality by making a front from any other, and all consequently that is nothing but a sash-frame, to seeming in imminent danger of toppling produce an architectural work by mak-down. To look at it one would say ing the sash-front look massive. The that a healthy child would have no thing is impossible, of course. Although trouble in kicking it over. Our swashby skillful treatment an architect may buckler, so far from being formidable, the utmost of inadequate dimensions, instability of equilibrium that would be a massive sash-frame is beyond his in any case produced by the erection of powers, and a cyclopean sash-frame, the front in vertical slices and without such as the architect of the Fagin horizontal lines, is aggravated by the building has attempted, is beyond his fact that the stilts that support it are grievously overloaded at the top. Not only does this top over-weight the substructure, but the things of which it is made up are even more outrageous than the detail of the sub-structure, which one would say was impossible if he saw only the sub-structure. The huge cornice of the central slice, the things that support it, the thing it supports, the imitation in the side gables of logs of wood in masonry, the difference between these gables—has the heart of man ever conceived such atrocities elsewhere or before?

Up to date, and so far as we know, the plane of the front, he has not crossed the Fagin building is the most discreditable piece of architecture in the United States. In spite of our caution about the superlative degree we are compelled to employ it. This has all the vices and crudities that we call "western," though in fact the geography has nothing to do with them. As we have before remarked, the commercial architecture of Philadelphia is, upon the inapt, for protruding rough stones and whole, more western than anything in leaving capitals and bases off from the West, though there is nothing quite so outrageous in Philadelphia itself as this building in St. Louis. But it is ened boots. It is a disregard of ele-significant, we fear, of the same lack of anything that can fairly be called a gard characterizes the whole design of public from which Philadelphia suffers the Fagin building so that the predom- that such a defiance of common inant expression is not so much of sense and common decency should be crudity or rudeness or mere ignorance, offered to the people of St. Louis as has been offered them in the Fagin







appear once more in the land.

It is my purpose in this paper to strong spirit of piety. show how this Second Spring was brought into being, to briefly recount clude that there never could be a rethe history of the road by which the vival or awakening of the glazier's art Glazier returned to his proper place in until these conditions exist once more: the world of art. All history tells us a believing people filled with a love for that colored glass windows are essen- their faith, and willing, like the faithtially a component part of mediæval ful of the Middle Ages, to make sacri-

HE religious big- Christian architecture, one of its greatotry of the six- est glories, and that Christian architectand ure in its turn is one of the composeventeenth cen- nent parts of Christian Art, which is turies, the weak- nothing more than the manifestation ened faith, care- under material forms of the beauty of lessness and God as it is mirrored upon the hearts political fanati- of believing souls, the recitation of the cism of the Credo under forms of imagery and in eighteenth, to- lines of beauty. We cannot, therefore, gether with the expect to find any branch of Christian abuse through a wrong use of the Art blooming and flourishing where material employed and the lack of faith is absent or half-hearted, but only patronage left the glazier's art at where the atmosphere is charged with the beginning of the present century the fullness of belief. Faith, devotion, mutilated and shorn of its beauty—a sympathy and encouragement on the lifeless thing, apparently beyond resus- part of the people, although necessary, citation. It was destined, however, to are not enough in order to obtain the be born again, to enter upon its Sec- best results in any of the walks of ond Spring; the Winter was to pass Christian Art, it is all important that away and this flower of beauty was to the artists themselves be imbued with a natural art sense, quickened by a

If this be true we may rightly con-



Boston, Mass.

GROUP FROM MEMORIAL WINDOW IN TRINITY CHURCH.

Francis Lathrop.

to express by their art this love and

To turn from theory to reality we find to-day an awakening of Christian Art, a growing interest in ecclesiology, a desire to erect works of beauty in honor of the source of all beauty, and to make plain the same to mankind.

This has been brought about by a revival of faith, a growth of piety, an increase of devotion and inspiration; by the study of mediæval civilization among the learned; and by an earnestness of purpose among the clergy.

Continental Europe, in its recoil from the black night of unbelief, indifference and disorder that wrecked good morals at the end of the last and the beginning of this century, fell back upon the Faith of the past as its only anchor of hope. As the faith revived among the people it called for a material expression of its dogmas and history under forms of beauty, opening once again the fields of religious art to architects, painters and sculptors.

A similar revival of ecclesiastical art took place simultaneously in England; the sources, however, of this renewed life were not the same, they originated in the taste for mediævalism introduced by the writings of Sir Walter Scott, and by the impulse given to Catholic thought in the Established Church through the Oxford Movement of 1832.

Every branch of art found able leaders, men of enthusiasm, rare talents, and great energy: Pugin in England, Cornelius and Overbeck in Germany, Viollet-Le-Duc and Flandrin in France, and Giovanni Dupré in Italy.

These men inspired by Faith, recoiling from the self-seeking of the world, endeavored to rise to the pure regions of Christian Art. Each one, architect, painter and sculptor, entered upon their work with the spirit of faith, love and sacrifice in their hearts, and tried to make their art "a frame for the sacred Amid this revival picture of truth." the branches that developed most rapidly were painting and architecture, leading position.

fices in order to open a way for artists viving in our day the making of colored glass windows, although both France and England have a prior claim in so far as having produced the first picture windows subsequently to the French Revolution, but these works were nothing more than isolated efforts of individual artists, while in Germany on the other hand the subject was studied in all seriousness. Artists of ability gave their attention to the matter, and founded a school of glass painters. Munich became the centre of the movement, the worker in glass receiving the support of the then king of Bavaria, a monarch of æsthetical taste and discernment.

Between the years 1809 and 1820 M. Mortelégue painted with enamels on glass a figure of Christ for the Church of S. Roch in Paris; a few years after, William Collins, an Englishman, painted a window representing the marriage of the Blessed Virgin for the Church of S. Etienne du Mont, also three for the Chapel of the Blessed Virgin in the Church of S. Elizabeth at Paris; and somewhere about 1825 two windows were painted in Munich for a church at Ratisbon, after the designs of Von Hess. One was executed by M. Frank, a painter on porcelain, and the other by M. Schwarz, of Nuremburg.

These were the seeds of modern glass work, but for a while they were dormant, not fructifying until after the exhibition in 1831 of the paintings and designs of Frederick Overbeck at the Academy of Fine Arts in Munich. This exhibition gave an impulse throughout Germany to all forms of religious art and ultimately led to the establishment of glass works at Munich, under the patronage of the govern-This artistic and ecclesiological ment. movement, inaugurated by Overbeck, was led by Cornelius, an artist of talent, a man of thought, free from limitation and endowed with great energy. "Overbeck was," as King Ludwig said, "the S. John and Cornelius, the S. Paul of the revival."

John Frederick Overbeck, the apostle and among the handmaidens of the last of Christian Art to the nineteenth centhe glazier's art almost at once took a tury, was born on the 4th of July, 1789, in the city of Lubeck, in Germany. To Germany belongs the honor of re- His family for generations were preneces Isphalliss

Duke of Albany's Memorial, St. George's Church, Cannes, France. Heaton, Butler & Bayne.

eminent for learning and for their faithful adherence to the laws of piety as they gathered them from the Bible. The father of the artist was a great lover of the classics and believed in the possibility of harmoniously combining them with Christian thought; he therefore admonished his son to place "Honor in the right chamber of his heart and the Bible in the left." At the same time he pointed out to him that "the artist's and poet's mind should be as a spotless mirror, his heart pure and pious at one with God and all mankind. for the path to the Holy Temple of Art lies apart from the world, and the painter will go on his way all the more unassailed if he stands aloof from the temptation of the senses."

Overbeck left home at the age of seventeen for Vienna, to study under Fuger, then the director of the Academy of Art, a follower of the School of David, and a painter of pseudo - classic inanities. From the first there was very little in common between the pupil and master. Overbeck, following for a time, as he did, the lines laid down by his father, was naturally led to turn his whole attention in loving contemplation upon the art-inspiring pages of Holy Writ, and consequently rejected with scorn the hybrid classicism of the Viennese academicians.

In the fifth year of his studies he quitted Vienna, turned his footsteps toward Italy, hoping to find in the works of the pre-Raphaelite masters safe guides in the realization of his own artistic aspirations. Arriving in



Church Window.

Ed. P. Seppry.



A MEMORIAL WINDOW.

Tiffany Glass and Decorating Company.

Rome he, together with a number of pictures which expressed theological fully academic, their technique is hard, flat and devoid of all true feeling for too often subordinated to an arrangeartistic idea.

disseminated through the teachings of beck. Many of these fervent enthusischool are more noticeable in the col- ure, the beauty of which they ought ored glass windows than in their paint- to have heightened and brought out." ings. The artists seemed to have for- It is evident, the faults of the Munich gotten that the primary end of a win- school are dependent on the artists not dow is to admit light, and that the part fully recognizing that glass painting is it plays in the general ornamentation a special art, with its own laws, its own of the building is only secondary, hence its share in the adornment should be of picture painting have no more to do subordinated to its primary use, a with it than those of sculpture have; truth well understood by the glaziers that it is light that has to be dealt of the thirteenth century. The chief with, not shadow, translucent glass, aim of the artists of the Munich school not solid canvas; or as an acute seems to have been to make their win- observer said: "A picture is one

young German art students, formed a ideas or historical facts. Color was colony in the vacant convent of S. consequently of little value in their Isidoro on the Pincian, a colony of eyes in comparison with form, as form earnest workers, every one striving to was the true language of such ideas, realize, not only in their art, but also in hence they paid more attention to the their lives, a high ideal. This little drawing than to the color of the glass, band of artists, called in derision using the glass simply as a background Nazarites, whose mission it was to re- on which to paint a picture. This mode of generate religious art, were devoted to work made their windows unduly promitheir ideal and believed that "the true nent, hard, opaque and heavy, and as home of art is within the soul before the glass they used was even in texture, the altar of the Church, and that the limited, thin and uniform in color, the tabernacle of art has its foundation in shadows and lines they produced with the worship of God." This was the enamels were therefore disproportionorigin of the modern German school of ately preponderant. Then again as they religious art, a school in which the had to use thin and gaudy tints, in order objective is almost always sacrificed to to avoid making the glass opaque, their the subjective, tradition holding a higher windows were tissue-papery and valueplace than nature, the artists preferring less as color decorations; moreover as to copy the works of men, rather than their designs were so purely pictorial and address themselves directly to the work not decorative the artistic effect, when of God; hence their drawing is pain- the glass was set in mullioned windows, was greatly marred. That the above objections to the glass work color values, while their composition is of the Munich School are valid cannot be disapproved and are self-evident to ment that will better inculcate a doc- every careful observer, who has studied trine or a mental conception than an the windows of the churches in Munich, in the cathedrals of Cologne and Glas-The views of the Roman colony were gow. Often the designs are beautiful and filled with deep religious feeling, Cornelius at Munich and Schadow at but are far more suitable for wall pic-Dusseldorf. Students flocked to Rome tures than windows, and show that an that they might sit at the feet of Over- art which is successful on canvas is just beck, and imbibe his theory of art and the reverse in glass. Or as George learn his method of work. Joseph Fuh- Edmund Street said: "That it would rich became a veritable second Over- have been much more delightful to see such subjects represented on the walls astic artists returned to the Fatherland, than essayed in windows, where they where, in frescoed churches and painted disobey all the necessities of construcwindows, they made manifest their mas- tion, are deficient in their effect and ter's teachings. The defects of this disagree in toto with all the architectpowers, its own limits; that the laws dows frames for transparent pictures, thing, a window is another, and that

in one will, for this very reason, have a scribed with extracts from God's Word, poor effect in the other. Take merely conveying His gracious promises, may as an instance the vast difference which be introduced; but, with this exception, lies in the fact that in one case the the paintings are to be direct historpainter has, as the material on which he ical representation of a series of scenes is to work, an opaque substance, in the from the Bible, treated according to the other one through which the light freely laws of arrangement and design necespasses. In the former case he may sary under the technical conditions of manage his light as he chooses and as glass painting." That Mr. Ainmeller best suits his subject; not so in the and his associate artists may have found other—he must take the light as nature it somewhat difficult at times to arrange gives it him and must do the best he their subjects so as not to do violence can with it. He can resort to no arti- to the prejudices and antipathies of the ficial arrangement; if he does he Scottish Presbyterian mind, I can well blackens and spoils his windows."

the Established Church of Scotland, the enamels. which is a Protestant Presbyterian ity, or of any persons of the Godhead; tecture were imperfectly understood. you will place no nimbus or aureole staves, scallop shells, nor are any to be toration of churches which had fallen clothed in the costume of the Roman into decay. An activity in ecclesiastical

which is adapted to have a good effect hierarchy—angels holding scrolls inbelieve, but what that has to do with One of the greatest efforts of the windows as colored glass windows, I glass painters of the Munich school is fail to see. In surveying the windows undoubtedly to be seen in the Glasgow of the Glasgow Cathedral, the artistic Cathedral, where they filled forty-two spectator is at once struck by their windows, with glass at a cost of one thinness of color, by their exaggerated hundred thousand dollars. In this diapered backgrounds, their inharmoniwork they were free to display their ous borders of white and red, the genknowledge and talents as glass painters, eral refusal on the part of the colors to except in two particulars: that is, as to blend with one another, and a marked the choice of subjects and the tradi-tional treatment of the same. These ornaments of the glass and the archilimitations have been given as an ex- tecture of the cathedral. The drawing cuse for the inferiority of the windows of the figures are excellent, more parin comparison with mediæval work, but ticularly the Prophets in the North in truth they were probably more an Transept designated by Baron Von annoyance to the artists than hin-Hess, which are strong in conception drances in producing good colored win- and expression, but this does not make That this supposition is correct, up for their lack of color value, the the reader will agree with me if he first requisite in works of this kind. bears in mind that the artists were all Through an excessive use of enamel the fervent Catholics, while the specifica- durability of the glass was greatly lestions read: "It must not be forgotten sened, and in consequence many of the that Glasgow Cathedral is a temple windows are to-day disfigured by dedicated to the religious services of blotches caused by the peeling off of

The day of the Munich school of Church. According to the principles glass painting has passed away forand practice of the church, no repre- ever; it has reached its limit of desentations in painting or sculpture are velopment; it has fallen from the anywhere admitted for religious pur- hands of artists into that of manufacposes; the services are very simple; turers. It was a noble effort, but there is no pomp, no symbolism of failed of success because the nature of Rome. You will not use any symbol glass, the requirement of the art, of the Virgin Mary, of the Holy Trin- and its place as an adjunct to archi-

The English school of glass painters around the heads of any saintly person and glaziers was called into existence represented; apostles must not be dis- and given a strong Gothic bias by the tinguished by keys, swords, pilgrims' revival of church building and the resarchitecture was brought about, as I his attention largely to decoration, as have said before, by the growth of his genius and skill lay in designing Catholic thought within the Anglican ornamental details for the carver, the church. The effect of the teachings of metal worker, the wall and glass John Henry Newman and other Ox- painter. The most important and one ford men upon ecclesiastical architect- of the most successful of Pugin's ure and decorations was magical, churches was that of S. Chad at Birsocieties were formed to study the sub- mingham, and it is in this church that ject, books issued, papers and maga- the student may study the revival of zines founded, in whose pages all points the glazier's art in its first throes for of ecclesiology were discussed and ex-recognition as an important element in plained. The artist, the architect and the completeness of a fully-developed the decorator, true to their inborn in- Gothic church. Here, as in most of sular instincts, turned to Mediæval the churches of the revival, the true English church architecture for ex- place of glass painting was not underamples to copy, motives to develop, stood. Its value as a color decoration and rules to be guided by.

ogy, Pugin was to ecclesiastical archi- mediæval glass. tecture and decorations, viz.: he was the the Gothic movement in church build-This singularly gifted man, Augustan Northmore Welby Pugin, noblesse, the son of reduced to £,18,000.

was lost sight of. It was nothing more What Newman was to the new theol- than a slavish imitation of English

Mr. Warrington, the maker of these Father, the Leader, the Lawgiver of windows, although sound in theory, holding, as he did, that "beauty and harmony are founded on propriety," that as a window is a "portion of a builda descendant of a family of the ing, and, if painted, of its decoration," an it should be in harmony with the style architect, was born in London 1812. of the building; hence if the building He first came into notice in 1836 as the be Italian, "so," he says, "in my opinauthor of a remarkable satire on mod- ion, should the windows and all other ern architecture called "Contrasts," decorations be of a like character." which was followed in 1841 by the Gos- But Mr. Warrington, like all the other pel of Church building movement: glass-painters in England, was at fault "True principles of Gothic Architec- when he gave expression to his views in ture," and this was supplemented in glass, as his were only copies of those 1843 by "An Apology for the Revival of the Middle Ages, he forgot that of Christian Architecture in England." true art is never mimicry. In place From time to time be put forth other of working out a window on Mediæval literary productions, all relating to the lines to something better than was same subject, among them his "Glos- produced in the Middle Ages, he sary of Ecclesiastical Ornament and was content if he succeeded in mak-Costumes" is the best known. His ing a faithful copy. Sir Charles Eastdrawings are wonderfully beautiful, lake, in speaking of the windows in S. but his embodiment of them in wood Chad's, says: "Much of this glass is and stone are often disappointing. well designed, so far as the drawing of There may be good reason for this, figures and character of ornament are as he himself said, he never had the concerned, but it has the all-important opportunity of doing a really fine defect which distinguished most of the work, of doing justice to his designs. glass of this period, viz.: a crude and The college at Maynooth is a case in inharmonious association of color." point. It was agreed to expend £30,- This defect, together with equally as ooo in carrying out his plans. When great a one: the absence of color, is now the work was under way the sum was just as common in English windows as it was then, and what is more, they do In my judgment, although he was not seem to be able to overcome it. one of the most remarkable architects It is true Mr. Haliday, a follower of of his time, he was more of an artist, Burne-Jones, has attempted in these and, were he living now, he would turn later days to combine beauty of form



with beauty of color, but without any ing after better glass. However, the ries of most of our modern productions." windows of such artists as Clayton and man and French work.

The English artistic world is waking up to the shortcomings of their glass, and plainly see the remedy. John Aldan Heaton, in speaking of the windows in Keble College, and comparing glass by copyists—copyists whom one school. feels inclined to class as "clerks"order for a picture to an eminent artist, man to copy it in color on canvas?

in stained glass; whereby we at once fourteenth centuries. lose 'touch,' sparkle, breadth and origicharacteristic.

"Indeed, stained glass, theoretically, marked result. His failure is largely should be very much of the nature of a due to the glass he uses: it is too good, sketch by an able hand, vigorous in contoo free from blemishes, too regular in ception, strong in handling of the princitint and texture; then again his color, pal forms, and slight as possible in the as well as his good drawing and compo- mechanism of detail; practically the sition, is often marred by excessive and glass should be variable in thickness, ribby unnecessary leading. The Englishwork- and full of air bubbles, so as to produce ers in glass, as a rule, rest satisfied in gradation of color and enhance the being able to make a fair imitation of jewel-like effect of its translucence the windows of the Middle Ages. There the leads, broad and plentiful, should is very little progress among them in supply the place of darks-formulæ the way of developing the art or striv- which seems almost exact contradicto-

In these remarks Mr. Heaton has Bell, and Heaton, Butler and Bayne pointed out the principal cause of the are creditable as far as they go. They defects, so noticeable in English winare almost always good in drawing, and dows, and at the same time has touched much superior in every way to those of the keynote which will lead, if followed any other makers in Europe. If they up, to great improvement in the art. are lacking in color, they are at least If his suggestions are followed the Engfree from the raw and unpleasant con- lish glazier will be led to travel the trasts so prevalent in much of the Ger- same road so successfully trodden by his American brother.

On the whole I believe I am justified in saying that the larger part of the English windows of to-day are extremely thin, often cold in color, and this in combination with their conventionalism, them with those of S. Pierre at Char- in spite of their good drawing, makes tres, says: "The mere fact of modern them rather tame and uninteresting glass being drawn on paper only, even when placed side by side with either by such accomplished designers as Mr. Mediæval windows or the rich and Burne-Jones, and then transferred to deep-toned glass of the American

The modern French school of glasspoints at once to an inevitable and painters is very similar to the German, fatal element of inferiority. What with even a stronger tendency to look would a man think, having given an upon colored windows as easel pictures; apparently among the artists there is when he discovered that the eminent art- little or no leaning towards Mediæval ist had only drawn it in chalk on paper, processes or any apparent effort to attain and then handed it over to his young in their work the incomparable beauty of the windows which adorned the "Yet this is what is done universally French cathedrals of the thirteenth and

It is surprising that the glazier's art in nality of handling, and get in exchange France has taken the direction it has, the mechanical monotony of the copy- in view of the fact that the glass painter ist; with this further mischief, that had so many good examples of the old whereas the canvas or the panel may glass at hand to study, and that kindred bear, and often with great advantage, the arts have followed national traditions most minute detailing and stippling, as with the most brilliant results. However witness the work of Memling or Van it is undeniable that there has been Eyck, such work is fatal on glass, where great progress of late, but there never translucency should be a prominent will be any work of artistic value done in glass of equal rank with French



A FRENCH WINDOW.

Designed by Charles Champegneulle.

painting and sculpture until the influ- glass windows from a transparent them be mere copyists of the past like adventure by the windows of their inherent art-sense, while with the and constantly increasing Germans art is largely subservient to success. a theory, a literary idea, and with the English (I am speaking of ecclesias- much of an artist to imitate the works tical art) it is little more than a con- of the past, no matter how beautiful scientious imitation of one style—the they may be, he sees that to imitate the Gothic period—the dead past.

Claudius

Champegneulle.

the figures, the general composition, of to-day, using all the past can teach the richness of details and ornamen- him in union with all that modern tation.

itations of twelfth century glass, but materials; keeping himself in touch are not so carefully finished and ex- with his age, therefore, we find his ecuted as the church windows of Cham- work is original, a creation and not an pegneulle, made on the same lines, and imitation, the embodiment of an artistic neither artist is equal to Oudinot, whose thought and not a feeble portrayal of style is that of the Renaissance. What an effete idea of another age. I have said of French work holds good of the Belgian. All French and Belpoint, of contrast between the American gian glass painters fall short of their artists in glass and those of Europe, it aim, and this is because they all insist is this; he seeks for perfect color effects, upon looking at a window as they would paying very little attention to form, so a painting on canvas, but if the day long as he reaches his chromatic aim. ever comes that they concentrate their For this he has been found fault with minds upon the development of colored by some few foreign critics, "men ac-

ence of the German and English schools mosaic starting point we will see are cast to the winds and the glass- marvelous results. If the art of glass painter returns to the study of the great painting, the making of colored glass picture-windows of his ancestors, and picture windows in the nineteenth Every one knows that the French ar- century, among the Germans, English tistic world is too broad, too progress- and French, has not attained perfection, ive to allow its glass painters to walk it is because they have not taken up the much longer in the narrow way of the mosaic system of the Middle Ages and Munich school, and too original to let developed it, a truth proven beyond perthe English. The French call upon all American school, where this principle forms of beauty to give expression to of work has been carried out with great

The American artist in glass is too art work of by-gone days is an open So far the most creditable colored confession of inferiority, and the makglass windows produced in France are ing a copy do duty for an original is a the works of M. Oudinot, Ed. Didron, plagiarism, which is contradictory to Lavergne, Coffetier and the generally accepted principle that the true aim of art is to create and not The series of windows made by to imitate, hence, he has endeavored to Didron for a church built at Carthage work on original lines, although he by the late Cardinal Lavergne are said never hesitates to use and develop to have great merit, although archaic in mediæval motives when they will serve style and composition, and showing a his purpose, yet he is careful to work decided bias on the part of the artist them out in conformity with the detoward mediævalism. In contrast of mands of our day, under the guidance method to these windows there is a of modern culture and the ever-increasrose-window in the Church of La Med- ing volume of knowledge. He knows line at Rouen, by Lavergne, an artist that it is impossible to recall the spirit impatient of all stain-glass traditions, of the dead workman, the spirit which has been praised by well-known of the Middle Ages, the aggregation of critics for the beauty and knowledge influences and forces that brought their shown by Lavergne in the modeling of work into being; he is essentially a man training can give him in skill of hand The works of Coffetier are fair im- or modern science in instruments and

There is another point, a marked

subject says, "to the crude color of Bavarian, Belgian and French modern glass, or to the sad, ineffectual glass of England, and are not capable of understanding our advance." Perfect color with perfect form are seldom found in union even in nature. "Color, to be perfect," says John Ruskin, "must have a soft outline or a simple one; it cannot have a refined one; and you will never produce a good painted window with good figure drawing in it. You will lose perfection of color as you give perfection of line. Try to put in order and form the color of a piece of opal." "Even in figure-painting the as Veronese." "Any of these blood of the hand." men would have looked with infinite painted windows." has accomplished in glass. Until Mr. Louis G. Tiffany and Mr. John La were content with imported windows, and German *artisans*, men of mechanical skill, often of considerable ingenuity, but with little, if any, artistic ability.

The above-named artists began their studies, investigations and experiments ing it would yield the best results.

Mr. Tiffany aimed particularly to deglass to their "fullest extent" in color some foreign observers.

customed," as a recent writer on the and texture, in order to obtain in the glass itself light and shade, through depth and irregularity of color in union with inequality of surface, in that way hoping to avoid the "dullness and opacity" which invariably accompany the use of

paint.

Mr. La Farge endeavored to obtain the same effects by separating his lights and darks from one another by ideallead-lines, in some cases plating glass over these lines, seeking to lose the lines or more truly making them apparently a part of the glass, or, in other words, working out his drawing with small pieces of glass, assisted with carefully studied lead-lines, and bringgreatest colorists have either melted ing the whole together, as happily extheir outlines away, as often Coreggio pressed by Mr. Heinigke (who is himself and Rubens; or purposely made their a clever artist in glass), "with a glaze masses of ungainly shape, as Titian; by plating one, two and three thickor placed their brightest hues in cos-nesses of larger pieces over them, much tume, where they get quaint patterns, as the human skin covers the flesh and

Either system requires the strictest disgust upon the leafage and scroll- attention of the artist, not only in drawwork which form the ground of color ing the cartoon but in every step taken in our modern (English and German) in the process in making the window; The American nothing can be left to the mechanic, as workers in glass are essentially color- the final result depends on the proper ists, moreover masters of their mate- adjustment of the color values-the rials, and have at last received a recog- artistic arrangement of the leading—in nition from the most artistic nation in their relations to the tout ensemble. It the world; France has conferred upon may be said with truth of both these John La Farge the Cross of the Legion methods that they are the artistic of Honor, for the great results that he methods par excellence, "a new style of glass-painting, founded on the most perfect practice of the mosaic system," Farge turned their attention to the viz.: the putting together in juxtaposistudy and making of colored glass win- tion of various pieces of glass of divers dows, some ten years ago, Americans colors and shades, so as to form a translucent picture, where depth of color, or with poor imitations of European light and shade, correctness of drawing, work made in this country by English roundness and distinctness are carefully preserved.

Mr. Tiffany and Mr. La Farge have had many followers, but only a very few have obtained marked success; among these Francis Lathrop and Maitalmost simultaneously. For a time they land Armstrong stand in the front rank. worked on identical lines, to at last di- The reason for the non-success of the verge in their methods, although they many is the want of a true appreciation both held to the mosaic system, believ- of color in all its subtile variations and

relations.

For the same reason American picvelop the "inherent properties" of the ture-windows are not appreciated by how American windows are made, I will attempt to epitomize each step taken

inception to the completion. The artist or designer having chosen before his thoughts become concrete or tangible), places it upon paper. When making the designs he always keeps in mind "that the function of colored glass is to modify and not to impede the light, and also that, being glass and are its two essential æsthetic characteristics, which must be preserved at any the drawing, to emphasize the outline, on the other hand avoided where they

line transfers are made upon heavy an opaque and transparent mosaic. manilla paper. One of these is cut into *time a portion of the paper equivalent branch of the work very little advance terns are placed, in their proper order, occupied by leads having previously heretofore paid too little attention to been indicated with lines of black the matter, although it is one of vital paint; the whole is then placed importance, and is many times the rock against the light. The second trans- upon which their work is wrecked. fer is not used until the window is I do not mean to say that our painted ready to be put together, which will be work will not compare favorably with explained later on.

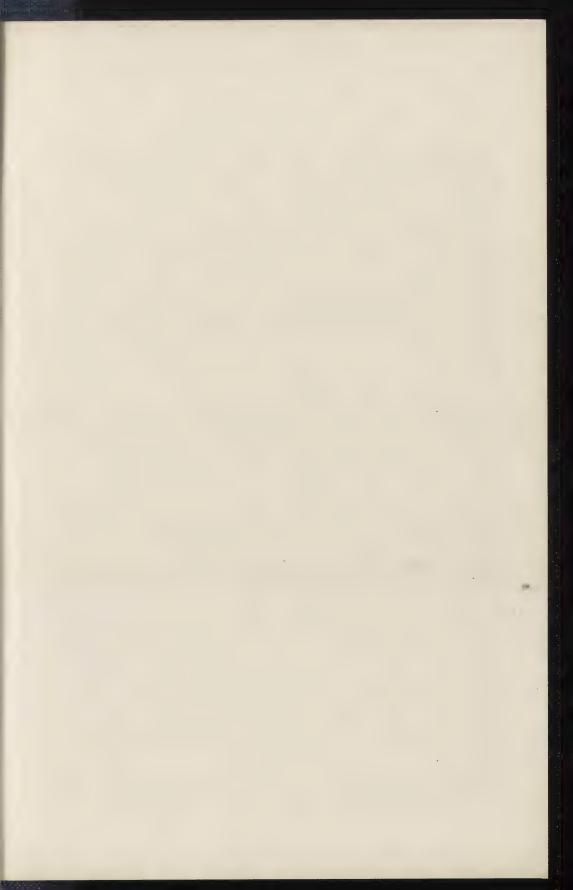
or brilliancy of the glass.

The artist now makes a careful se-

That my readers may understand just ever may help to carry out his theme both in color and form.

The glazier then, with the artist in the process of making one, from the standing by, with the cartoon and color scheme before him, removes one of the paper templates from the glass easel, his motive (by motive I mean that and passes a sheet of glass of the apwhich actuates or produces a definite proximate color over the opening left, conception in the mind of the artist until that part of the sheet is found which corresponds with the color sought. Sometimes a dozen or more sheets pass through the glazier's hands before the right piece is found. When found, the paper pattern is placed upon the glass as a template, and the glass cut to the being colored, transparency and color same shape, which is then attached to glass easel with wax, taking the place of the paper pattern. This process is cost;" therefore his scheme of color is repeated until the entire window is built studied with great care in its relation up. It often happens the right piece of to the ever-varying light to be trans- glass cannot be found, so one piece is mitted through the glass, the harmony taken for the form and this is plated of color with color, and its psychologi- with another for the color, or where the cal influence upon the beholder; whilst color is not what is wanted, in tone or his drawing is planned so that his fig- shade, it is plated with another color, ures profile against the background, as and in some cases more than one plating if they were intended for a low-relief; is used. This method is truly defined and his leads are so arranged as to assist as painting with glass, and the beautiful results obtained in its practice fully to deepen the shadows, and their use justify the process. Where the window is to be seen as much by night as by might diminish the translucent qualities day, the glass is picked for its beauty as a reflecting medium as much as a From the finished cartoons two out- transmitting one, so as to count both as

The next step is for the artist to paint patterns by means of a three-bladed the flesh of the figures; this is done scissors, which in following the lines of with fusible metal oxides, which are the drawing not only separate piece made to attach themselves to or become from piece but removes at the same a part of the glass by heat. In this to the heart of the lead, in this way has been made over that of both the making an exact pattern. These pat- old and modern masters, which at its best was and is still unsatisfactory. upon a sheet of clear glass with bits of Here is a great field in which there is soft wax; the space to be finally much to be done. Americans have that of other nations, but it is not as good as the best work of two or three lection of the glass he wishes to use in European masters of the art. This the window, not only for color, but also state of things, however, will not last for movement, light and shade, or what- much longer, for the good reason that





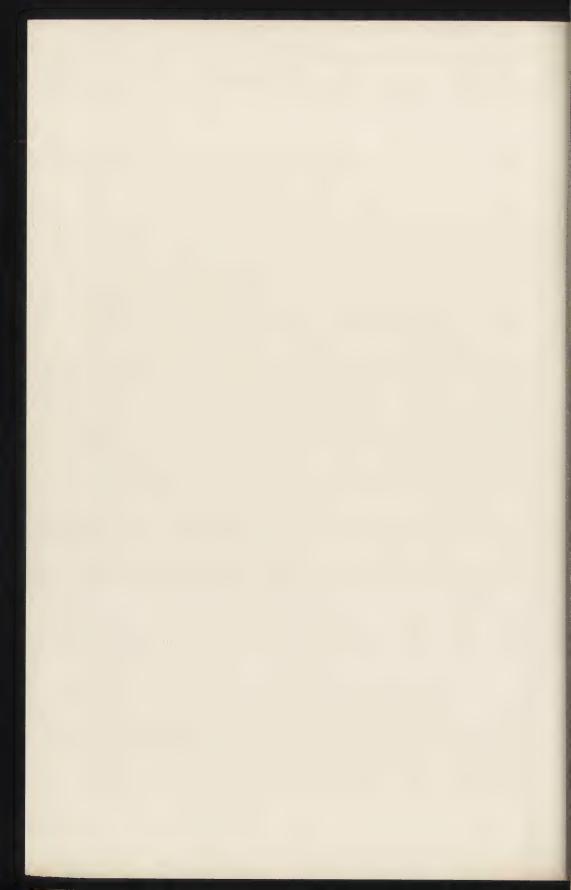
THE FALL, (THE CARTOON.)

Rosina Emmett Sherwood, Designer.



THE FALL. (THE WINDOW.)

Tiffany Glass & Decorating Co.



window will shortly far surpass the as the mosaic portion does now, so that often add to the general artistic effect. ultimately we will stand, in every resdegree as the makers of colored picture windows.

Our window is now ready for the leads. The glass is removed from the transparent easel and placed in a tray, carried to the work-bench of the glazier, where the second transfer from the upon the bench.

A piece of glass is selected from that in the tray, laid in its proper place on the transfer, to form the starting point, to which piece after piece is added, until the whole window is put together, each hair lines, and yet are strong. piece being connected with the next by a narrow line of lead.

are smooth. what its contour may be.

piece of glass, it is held in its place on mosaic can be made, the smallest pieces the bench, over the corresponding lines of glass united one with another in endof the transfer, which is the glazier's less combinations. guide, by the aid of short, round nails, tapering to a point at one end and pelled to lead his window to excess, square at the other. The next piece is often to the detriment of his design, bethen joined to the first, the edge of the cause he could only make his glass in second being inserted in the free groove small sheets; but the modern work does in the lead, another piece of lead is not labor under this disadvantage, albent around the second in its turn; in the meanwhile the nails are removed to the outside of the last piece added, and the lead-strip is continued by fitting the end of a new one to the one used. This every lead line is made to do its duty process is repeated until every piece of glass is fastened to its fellow and the joints and pieces of lead are then soldered together on both sides of the window, and at the same time tinned in order to protect them from adverse atmospheric influences.

Where stay-bars are needed the winthe same by copper wires, which are sol- rative material is dependent upon its

a number of artists of ability are study- dered to the leads. The bars are so ing the subject in a most serious man-placed as to interfere as little as possiner. The painted part of an American ble with the drawing or the light and shade of the design; in many cases the work of all other people, just as much bars are made to follow the leading, and

In the American school the subject pect, pre-eminent in the superlative of leads and leading has been studied with great attention, more so than in any other, because the mosaic system requires it in the very nature of things, and consequently there have been vast improvements made, both in the leads and in the methods of using them,

Leads are now made that will bend cartoon has already been placed flat laterally, but in no other direction, and are used where the window is exposed to strong winds; strong and broad leads are made in forms which give them the appearance of being very much smaller than they are; others are made like

In addition the American worker has invented a number of other mechanical The strip of lead used has lateral contrivances for fastening the pieces of grooves to receive the edge of the glass, glass together. The most practicable while the anterior and posterior faces are those respectively of Mr. Bray and The metal being soft and Mr. Belcher. The first is by far the flexible, the glazier has no trouble in best, because it is freer, more artistic, bending it around the glass, no matter and can be readily worked in union with every form of leading. Having in this way leaded the first either of these fasteners the finest

The mediæval glass-worker was comthough in Europe excessive leading is affected-an affectation born from an unjustifiable imitation of the past. America, however, as I have said before, not only as a fastener but as a line in the composition, sharing largely in the whole window is upon the bench. The design, helping the shadows and emphasizing the drawing.

The great fault hitherto with American artists in glass has been their disregard of the relationship of their windows to the architectural surroundings; and, again, through their clear knowledge dow is fastened, at short intervals, to that the true value of glass as a decocolor, the combination of the same, the returned-returned to stay; that the often careless in their drawing.

take it.

about the colored glass windows of to- auxiliary to architecture, subject to the day beyond the fact that the glazier has imprimatur of the architect.

prismatic play of light, and the niceties Second Spring is here, charged with in light and shade has made them too bright promises for the coming Summer. One more word and I have fin-This state of things is rapidly im- ished. As the future field for colored proving; in fact, even now it is a thing glass and picture windows will be of the past, and the future holds out largely an ecclesiastical one, it begreat promises for American glass, hooves the artist in glass to study the American methods and American art- principles that govern Christian Art if ists. The prize is ours if we will but he hopes to reach the highest point; and it will also be well for him to re-There is very little more to be said member that the glazier's art is but an

Caryl Coleman.



BYZANTINE ARCHITECTURE.

Part V .- BYZANTINE CONSTRUCTION.



E should think that a Engineer-in-Chief

building it, of the scaffolding and cen- and then throw the wooden one away? tering used, and the means of raising the Did the Romans do so? After examinmaterials, more particularly when there ing the illustrations of Roman work and were huge stones to be lifted; but Proco- pondering on the subject, he sought in pius' eye was single, his sole object was the works themselves and in the methto glorify Justinian, and though we ods now employed in Italy the answer might hope he got his reward, it is to be to his questions, and found the answer feared he did not, or he would hardly to a riddle that had completely posed have published his book of scandalous mankind ever since Roman methods anecdotes of the Court, and of his first were generally abandoned; for the tile master, Belisarius. As we can get almost skin of vaults is still practised. Having nothing from him, we can only hazard his observation and his judgment sharpa conjecture as to the presence or ened by his first successful attempt, he absence of centering for the original sought and solved the more difficult flat dome and for the present one, and problem of Byzantine construction, and all the other particulars we can get are in 1883 he gave to the world his second from the existing works. The knowl- great work on "The Art of Building edge that Paul the Silentiary had is put among the Byzantines." into a poetic form, and this form is not likely to deal with such matters as building, except in so vague a way that it can be but of little use to mere prosaic constructors, and besides its being a poem, it is in Greek. What Salzenberg got to know of the construction of Sta. Sophia is locked up in German, so that anyone treating of Byzantine construction would be either forced to deal in generalities, or to omit everything ("Persia's pomp, my boy, I hate"), that could not be gathered from pubmean M. Auguste Choisy, of Paris, the stroyed, not to speak of the destruction

of Roads and contemporary, and Bridges. His professional avocations probably an eye-wit- made him anxious to interrogate the ness, of the colossal past, and to see if the methods formerly works of Sta. Sophia employed could not aid him in the would have given us present; being a man of genius, he said some interesting par- to himself, Why should I first build a ticulars of the methods employed in wooden bridge to build a stone one,

It is on this work I must mainly rely for giving you the following descriptions. M. Choisy draws the line of the influence of Roman construction at the Adriatic, and considers that as to the west of it the methods pursued were Roman, so to the east of it all the methods were Greek, modified, course, by the influences of Asia.

"Persicos odi, puer, apparatus" tells us that in Horace's time the Rolished drawings, or an examination of mans were not unacquainted with Perbuildings as they now stand. Fortu- sian habits, and we may, I think, point nately, however, we have a genius to Persian domes as the models from amongst us, who, after having laid open which the Pantheon was imitated, to all eyes the economical construct though it is, of course, possible that tion of the Romans, has bestowed his domes of large dimensions were used at time and talents on making Byzantine an early period in Asia Minor, which construction equally clear. I, of course, successive invasions may have de-

wrought by the savage Tamerlane and his Tartar hordes. The emperors of the lower Empire were constantly at war with the Persians for the possession of Mesopotamia and Armenia, and in effect to each vault its centering. the Byzantines must consequently have But he is loath to build this centering been even more familiar with Persian merely to destroy it afterwards; and methods than the Romans. M. Choisy with this thought he applies a mixed came to the conclusion that as the Ro- construction, half brick and half timmans had found a cheap method of ber. The vault is finished, the timber vaulting by first covering a light centre part alone disappears; all the brick with a network of brick, and then fill- work remains embedded in the mass, ing this with horizontal rubble work, and associates itself with its resistance; so the Byzantines had turned their to embody in the vault the greater part vaults without any centering at all. He of the mould which has carried it, is, says:-"Analyse a Roman vault of in short, the Western method. Amongst Western construction, you will scarcely the Easterns the notion of saving takes find in it anything but a little frame- a more positive form; the question for work of brick, which is its bony struc- them is not to lessen the expense of ture, its skeleton; the rest is only a the helping works, but to omit them. structureless backing, a filling of peb- The Greek architects frankly proposed bles and of mortar, a concretion pure to themselves the problem of vaulting and simple; one of those wisely primi- without centering, and, thanks to the tive works from which intelligent labor ingenious disposition of the materials, is purposely excluded, and which shows they were enabled to solve it. They an immense material force, the passive raised the greater part of their vaults instrument of a powerful will. In the by building them in the air, without East, on the contrary, in the Grecian support, without a resting-place of any countries, all is combination, all is cal-kind; their method is not a variation culation; each fragment has its office, of that of the West-it is a system aland its appointed place, in the vault of together different, and one not even dewhich it makes a part; besides the rul- rived from any Roman source. ing idea which conceives, the adjusting Choisy, "L'Art de Bâtir Chez les Byforce which executes, is seen throughout: one feels transported into an entirely different surrounding; and the monuments of the two schools thus be- idea, I will treat of each particular tray, even to their smallest details, the part of the structure. difference of the hands they have come from. I try to see a point of contact, arcommunity of thought and of tenden- Roman work, and this rubble work was cy, between these two schools, and the never rammed. Instead of the one only common tendency that I can seize course of bricks about every 5 feet, on is this: on either side they wished to they used from three to five courses of be freed from the subjection of helping brick about every 10 feet in height, works and of temporary aids. Is this a and in fortification about every 5 result of imitation, or the effect of tradi- feet. Byzantine bricks are said to be for economy one of those chance meet- is rarely less in thickness than the ings which good practical sense would brick and often thicker. At Blachernæ bring about without any exchange of the mortar is about two-thirds of the ideas. Whichever it may be, the analogy whole material. To make this mortar is only found in the principle; directly properly resistent, broken tiles that one comes to the details of applying it would pass through a 9-16 inch mesh the differences reappear, and the two were mixed in it. This mortar is schools separate from one another.

At Rome, where the vault is a monolith made from a plastic material, the solid mass which forms it requires a mould, and the Roman architect gives zantines," Introduction, 4to. Paris. 1883.)

Having now explained the ruling

Byzantine walls mostly have the stones of the rubble larger than in tional influence in the two schools? For generally larger and better burnt than my part, I incline to see in this search the Roman ones, and the mortar-joint called by Vitruvius Opus signinum, and old Roman custom.

churches at Athens, the walls faced with bets of the ribs, and require no centerstone have generally one or more ing. The temple of Diana, close by, is courses of brick between the stone vaulted in much the same way, so that courses, with very thick mortar-joints; one rib centre is all that is required for this gave more soft matter to squeeze the whole building. Arches are often than if the stone facing had been laid made by using square voussoirs, with with thin joints, and there was conse- the taper in the mortar-joint; and as quently less danger of separation be- often as not, they are built with a tween the facing and the rubble back- course or two of brick between the stone ing; the bricks, too, generally project cubes. beyond the stone, and act as bonders to the rubble. were marble monoliths, mostly used with the side walls, and each brick, against the beds, with square, squat being placed on the centering, naturally caps, beveled off at the bottom into falls into a normal to the curve; if we the circle. If the pier supported was a were to try and build such vaults withparallelogram, the thick abacus was out a centre, when we got up to the generally a separate stone, and was angle of slipping; we should be at a loss but slightly beveled at the sides and to know what to do, unless the cement deeply at the ends. Bronze rings, sometimes with fringes, are frequently springing were sufficiently thick or tied necking of columns, to prevent scaling or splitting; many cases of their use may be seen in Sta. Sophia. When dient; they built their vaults in slices columns were required of such a height the other way, i. e., they stuck the bricks as to render the use of monoliths im-Philoxenus, there was a circular piece with their caps and bases.

played in economizing centering, when soffit of the arch was not flat, but like

was used as a hydraulic cement and centering had to be used; but, I may partly as a material to resist heat. It say roughly, that it was done, in the is still used throughout Macedonia and case of stone vaults, by building them is now called "Khorassan" work. The in unbonded sections, so that the set of Byzantines preferred their lime made centres used for the first section could from marble, but used limestone when be used for each succeeding one. We marble was difficult to get or too ex- shall see hereafter that this principle of pensive to use, and, from the present unbonded sections was carried out in Eastern practice of keeping slaked brick vaults where no centering was lime for years in huge pits, it seems used. The baths of Diana, at Nimes, probable that it is a continuance of the which is Roman work, is vaulted by means of ribs and panels; the stones As I mentioned in speaking of the forming the panels are laid into the rab-

We, who build brick barrel vaults on Byzantine columns centering, make each course parallel were strong and quick-setting, and the added above the base and below the down, to prevent the sides from toppling

The Byzantines hit on a novel expeagainst the heading wall or arch, where possible, as in the case of the cistern of they were kept by the adhesion of the mortar, till the arch was keyed, and of stone or marble on its bed, much then another slice or arch could be larger in diameter than the columns, built against the first; there being no between each shaft, on which the upper bond, the mortar alone secured the adcolumn stood, while the lower one was hesion of each ring to the next. There sunk into it; this acted as a restraining was, however, the same difficulty that ring-at any rate, to the lower shafts. there is in standing up books vertically, Both metal and marble rings are found the least touch will overset them, and at the junctions of the slender shafts we therefore put them at an angle, with surrounding piers in Gothic work, the top touching the wall. The Byzan-Sheet-lead was inserted by the Byzan- tines built out a skewback on the headtines between the junctions of columns ing wall or vault, so that besides the adhesion of the mortar the position There is no time in a lecture to give made the bricks less liable to fall, only every example of the ingenuity dis- from the bricks being laid sloping, the a better key for plastering or mosaic.

right-angles.

the cistern of Philoxenus, or by little domes of sharper pitch. making these in sections of several Domes up to a certain period-M. courses, until the centre could be filled Choisy says to the ninth centurytar only, but could be secured by it gussets between them. In later work when one end was wedged into the ribs are often used as an ornament, so built were too weak, but the ellipse as that at St. Sergius and Bacchus. formed by the groin points gave them too These are so common in later examples much trouble, as it did the early Gothic as to be rather the rule than the excepbuilders. Consequently they made the tion. This form admits of a circular groin point a segment of any height dome being placed on an octagon, the less than a semi-circle, and made each points of the octagon coming in the

the teeth of a saw; this, however, made paner of the vault of the same section by letting the section revolve on the The Byzantines eventually brought central axis. A vault of this sort has a out the ends of the springing so as to peculiar appearance, and if horizontal form a curve on plan. This scheme sections through it are made, they take seems to have been adopted in the aisles the form of quatrefoils, and if a vertiof Sta. Sophia at Salonica. Sometimes cal section is made through the crown, this scheme was only partially used; the ends of the curve are rounded upthe springing courses were built in the wards. This peculiarity may be seen in ordinary way, parallel to the side-walls, the aisle vaults of Sta. Sophia. Out of up to the slipping-point, and the re- stone countries domes were mostly mainder was then vaulted over in sec- built of brick, and the plane of the tions at right angles as before. At rings was not normal to the curve, but Hadrian's aqueduct at Constantinople flatter. These planes, if produced, formed a brick vault has been built up to sup- an inverted cone, whose apex was much port the stone one that was giving above the centre of the dome, and the way, and the builders managed to keep cone was made flatter as it approached up the springing, until the two sides the crown. In a few examples, when the were within the length of a brick dome had been raised to the slippingapart (some 2 feet, I should guess), point, it was carried on by nearly parand they then wedged bricks in at allel rings, so that above the slippingpoint it was almost a pure cone made If a barrel vault was built from one by the revolution of a triangle. This end only, when the work got nearly to may be called the Arab fashion, as it the other end, they wedged in bricks at was a form of dome greatly favored by right-angles to the face of the rings; them. In some cases the top of the when it was begun at both ends, the dome was made on a platform and put middle was filled in by putting alter- on in a single block. M. Choisy says nate slices against the springing and he saw this being done in a Greek against the arches, so that the workshop at Smyrna, to finish a dome ends of each course were abutted, built without a centre; the tops of as may be seen in the vaults of domes were sometimes formed into

in with the length of one brick. An- were made with an abutment at the other plan adopted was to build the bottom, carried up vertically, and then end of the vault on a rough sort of joined to the segmental cap by a conskeleton centre of bricks, leaving a cave curve, as at Sta. Sophia, the wintoothing inside, and continuing the dows being formed in the vertical vault by means of toothings; this part. It was the custom, up to a cermethod was mostly employed when tain epoch, to stiffen the shell of the rough stones were used, which could dome by internal ribs, as at Sta. Sophia, not, like bricks, be held up by the mor- in which there are forty ribs, with forty toothings. In an ordinary groined and are then, I believe, merely bricks barrel vault on a square plan, the sec- stuck on; but at Sta. Sophia the ribs tions through the crown on both axes are bonded into the shell. There is are straight lines. The Byzantines not another form of dome of very striking only thought that the crowns of vaults appearance, i, e., those that are fluted,

the flutes act, like ribs, as stiffeners.

domes which preceded Byzantine times, Chapel of St. Satyrius at Milan, and at is found in the temple at Diocletian's the Baptistery at Ravenna, both of the Palace at Spalato, called by Adam the fifth century. M. Choisy says this con-Temple of Jupiter, and shown at plates struction is still used in Syria, Jerusa-33 and 34.* This method consisted of lem and Jaffa, only there they are used turning arches from centre to centre struction he found at $Mov\dot{\eta}$ $\tau\tilde{\eta}$ 5 $\chi\omega\rho\alpha$ 5. on the extrados of the arches There was also another plan used: in the spandrels. M. Choisy be-the ordinary segmental roofing tiles slipping point. This method is corvere laid the reverse way, making a rectly shown in "L'art de bâtir chez chain bond of every course; this is les Byzantines," woodcut 76, p. 69, and found at the buildings of Mt. Athos. in the plate No. 14, M. Choisy having found Adam's plates incorrect. Adam work, two or more courses were self why it was done, although he drew slightly convergent, did not converge the dome partly covered with plaster, to the centre; 2nd, the lower part of made to be seen. I made a rough pattern.' sketch of it under difficulties. I had no candle, and could only sketch by spaces that were not circular were lonica may carefully measure both.

centres of the flutes. The points of East India Company. This construction of mortar, with a core of hollow Another method of construction for pottery, was used for the vaults of the turning arches, and filling in between to form voussoirs; the terraces over cuthe spandrels with smaller ones, then polas were also made of pots, this conlieves that domes of this sort may were laid as voussoirs, with the hollow be built without centering up to the partupwards, and over the joints others

For forming niche heads in brickbeing a gentleman and not a brick- adopted:-Ist, the outer arch rose from layer, never seems to have asked him- a flat skewback, and the joints, though which proves that it was a constructive the niche was carried up horizontally and not an ornamental expedient. to the slipping point, and above the There is, however, a semi-dome to the courses were convergent as before. vestibule of the tomb of St. Demetrius When, however, the niches were flat, at Salonica, which, from being set out they often made the joints converge to in a pattern and having ornamental a central vertical line. This form is bands in the arches, was evidently called by the French "The fern-leaf

The first attempts at doming over looking at the place, and then putting made by converting a square into an it down on the other side by the light octagon where the pendentives are of a little window, and I was too lame small and corbelling may be used, but with sciatica to mount a ladder and an octagon was found to be almost as measure it, even if I could have got a inconvenient as a circle, and circular ladder. I mention this so that some of domes were turned over squares by my hearers who visit Spalato and Sa- means of squinches. At St. Nicodemus and Daphne, at Athens, and in the west Every architect knows that the dome at Sta. Fosca, and in the domes of Parof San Vitale is constructed of hollow ma and Piazenza instead of squinches pots, the pointed end of one, put into we find conchs or shells. The various the open end of the other, spigot and ways in which squinches and conchs are faucet fashion, a double line of these constructed are endless. The first was carried round in a spiral, and made dome with pendentives on a square the whole construction light from the plan, known to M. Choisy, is at Djecentre being hollow and without thrust. rach, and in this case the pendentives The father of the late Professor Cock- and the dome itself are struck from the erell used pots like these for the filling same centre, and the joints of the penin of the spandrels of a vault he built dentives are normal to the curve; the in the Cutler street warehouses for the ends of the pendentives merely abut against the arches, but where the dome proper, in stone domes, springs at the level of the crown of the pendentives,

^{*&}quot;Ruins of the Palace of the Emperor Diocletian at Spalato." By R. Adam. 1764.

it abuts on a skewback worked on a course of stone over the arch. There is another case with a much flatter dome, at the Mosque of El-Aksa at Jerusalem, supposed to be of the age of Justinian; both of these have this peculiarity, that the upper courses of the pendentives are thicker in the middle than at the ends, made so by means worked. M. Choisy says that brick domes on pendentives of Roman times are found in the valleys of the Mæander and the Hermus, but that the practhose in which the dome and pendentives were struck from the same centre, and those in which the pendentives and course of bricks laid over the arches and chamwhich the curve of the pendentive abutted, and the pendentive was backed up so as to form a square outside, consequently the dome had the appearance of rising from a square. For the sake of economy this brick skewback was often left out, but it was found that the acute angle formed by the abutment of the pendentive against the arches was too weak, and they then abutted the pendentives at right angles to the arches, either by a two-centered arch or by the arc of a circle, which prevented the pendentives being the arcs of the great circle, and as the dome took the form of the top of the pendentives, the domes were either squares with quadrant angles, or like an orange squeezed in on four sides; these domes may be seen at St. Marks and at Sta. Sophia, at Salonica.

These deformed shapes had, however, this advantage, that they could be used for oblong spaces; he observes, too, that when the cupola was of a smaller radius than the pendentives the Byzantines used thin bricks for them, not thicker than a roofing tile. The Byzantines gradually got to make these pendentives and domes as flat as was convenient, being only restrained by the impossibility of abutting the horizontal thrust when they were too flat.

It was not until the sixth century that domes were used of smaller radius than their pendentives, Sta. Sophia being one of the first known examples. M. Choisy also believes that it was not until the Macedonian dynasty, from the ninth to the tenth century, that drums began to be used and that St. Bardias is one of the earliest examples (1028 A. D.).* In of a convex curve at top, and the joints the decadence of the Byzantine Empire are without mortar and beautifully pendentives became pure corbelling, which enabled the Byzantine architects, when working for the Turks, to cut them into fancy shapes.

To revert to the groined vault, no tice only became common in Byzantine matter whether the plan was square or days. These domes were of two sorts, oblong, if the line of the groin point became a semi-circle and the vault was generated on this, it became a dome, the pendentives being an integral porcupola were of a different radius; a tion of it. These domes could be worked was originally in slices just as the groined vaults were.

In almost every Byzantine church you fered to make a skewback against see wooden ties that are carved in the fine ones and are plain in the ordinary ones. M. Choisy, who has visited a good part of Asia and Africa, recognizes in these ties a triple duty. First, they acted as bond to prevent unequal settlement while the work was being carried on; secondly, as ties or struts, to prevent the deformation of arches, vaults and domes while the work was green; thirdly, as safeguards against the shocks of earthquakes to which Asia Minor is so subject. The Byzantines did not trust to these ties, as all the thrusts were amply abutted—they were only an additional precaution in case of earthquakes.

> Probably the architectural students remember that the Temple of Diana at Ephesus was built on a marsh to minimise this risk and that the foundations were laid on a bed of sheepskins and charcoal, the remains of which were found by the late Mr. Wood. Constantinople was equally liable to this terri-

^{*}On the architrave of the door is a Greek inscription stating that the church was built by Christopher Bardias his wife and family, in honor of the Virgin, with the date of the rath indiction, 6537. This inscription is given by Texier and Pullan in their Byzantine Architecture, 1864, and by Duchésne and Bayet. "Mémoire sur une Mission au Mont Athos." (8vo. Paris, 1876.) And, curiously enough, they both agree in the date, though not in the translation. The era of Constantinople was 5508 or 5509, giving 1028 or 1020. From the acknowledged inaccuracy of Texier and Pullan, I have taken Duchésne and Bayet.

of shocks took place for eleven consecu- light and shade. tive months. The original dome of Sta. Sophia was so shaken that parts of it groined vaults and domed structures is fell on two occasions, and Antioch, this: In groined vaults it is a direct Berytus and Nicomedia were destroyed outward diagonal thrust in the direcby earthquakes during Justinian's reign. tion of the groin points, while in the M. Choisy tells us that he visited dome it is a diffused thrust all round Echekli a few months after an the periphery, and the aim of the Byearthquake, and found to his as- zantine architects was to counteract tonishment that the mosques with this diffused thrust by other vaulted domes were standing almost un- structures; so we see that, as a rule, touched in the midst of the ruins of the thrust of a central dome is abutted the town. Vitruvius (Lib. 1, cap. 5, par. by wide barrel vaults on the four sides. 3) tells us, that walls of cities should have their faces tied together frequently on pendentives, by four flat apses with with charred olivewood. At St. Deme-domical heads. Sometimes a mixture trius, at Salonica, a continuous band of of both is used; two sides are abutted planks was run through the arcades on by half domes, and two by barrel the top of the caps of the columns. vaults. At the Church of Sti. Apostoli In the case of barrel vaults, there were at Athens, apparently once a baptistery, two longitudinal plates on each side the thrusts of the four barrel vaults are wall at about the slipping-point, with abutted by triangular domes behind crossties halved on them; in groined the columns, and by the heads of the angle passing through the centres of out geometrically; from the centre of the piers, and in domes four angleties the central dome a circle Abbey; and in certain cases the Byzan- and two by barrel vaults. tines used iron ties, as at Sta. Sophia, as not to split the stone.

venna, and the church of Dighour in thinner spurs abut the pendentives. Armenia. Even as regards the sets-off to walls, the Byzantines usually make aimed at was to get the east and west inside. and those who like buildings cut up replaced with one of less thrust-i. e.,

ble affliction; it is stated that a series into slices complain of the want of

The difference of thrust between

Another method was to abut a dome vaults the plates and ties form a rect- niches. The plan of this church is set go across as well. In the cistern of the struck; where the north and south thousand and one columns, there are and east and west diameters cut holes at the top of the caps, on the four this circle are the centres of the faces, where ties, in round or half-round apses; where the diagonals cut it are timber, tied them to the other caps. the centres of the niches. Sta. Sophia All of us have seen the iron bars that is the mixed case before mentioned, run across the arcades of Westminster where two sides are abutted by apses,

The central dome and its pendenand in cases where an iron trellis was tives are abutted east and west by used, as the bond for piers, the ends of hemicycles, and north and south by the bars were not let in, and run with comparatively narrow arches; the hemilead, but were caulked up and down so cycles give abundant abutments, but the arches are of themselves insuffi-It should be remarked that the con- cient, consequently the architect has ception of abutments by the Byzan- carried two enormous piers on each tines was diametrically opposed to that side, from the nave to the external of the Westerns; the Westerns put their wall: the piers are hollow, and offer abutments outside, the Byzantines in- two spurs of irregular thickness-those side. The only exceptions I recollect opposite the east and west arches of are in the case of San Vitale at Ra- the nave being thicker, while the

In arranging the aisles, the point By the Byzantine arches of the dome to spring as low as method more ground space was got, possible, so as to get the upper gallery with very little extra expense; but of the aisles as an abutment. The dome, to our eyes the fact of the build- which was originally too flat and not ings being vaulted is not expressed, sufficiently abutted, fell, and had to be

ported on those piers before mentioned of the kibla. that are nearly 6 ft. square, and which Achmet. At the mosque of Adrianople, us and on the world.

of greater height; after this, a sinking built for Selim II. (1566-74), the archiin certain places occurred, the ground tect got eight points of support instead on which the four piers of the dome of four, omitted the grand hemistood compressed more than the other cycles, abutting the skew sides of foundations, the vaults between the the octagon and the kibla by apses, inner and the outer main piers were three of the straight sides by butforced out of shape, and had to be kept tresses, containing staircases, and the up by arches added underneath, sup- fourth side by the walls of the recess

To me the constructive improvements choke the circulation in the aisles; the introduced by the Byzantines form a pavement of the upper galleries most fascinating study, as one can folslopes inwards to an extent that is low each improvement, from the simple visible, and these settlements hap- wall to the abutments of vast domes, pened within half a century of the build- and can see the persistent efforts made ing of Sta. Sophia; the pendentives are to cure defects and to get over the diffinow surrounded with large masses of culties that arose in practice, while in material which had to be built round addition to this, one sees that the eccenthem to prevent the building going to tric shapes that vaults and domes often ruin; but in spite of the original fault took are purely the result of the unof construction, the church has lasted impeachable logic of construction. I more than 1,300 years, and is one of the think we in England have hardly shown most magnificent creations of architect- a due sense of the gratitude we owe to ure. Its conception was too original M. Choisy, a government engineer overto be perfectly carried out at the first whelmed with work, who has devoted attempt, but subsequent Byzantine his holidays and the small leisure he architects continuously strove to avoid can find to the elucidation of methods its defects, while following it as their of construction that, before his publimodel, and the best way to find out cations, were absolutely incomprehenwhere it was weak is to compare it with sible—who has followed up the subject the subsequent churches for which it with the sagacity and perseverance of has acted as a model. At Sta. Sophia, a sleuth-hound; who has visited Italy, at Salonica, the arcades, north and Dalmatia, Greece, Macedonia, Thrace, south, were set back 11 ft. 4 in. from Asia Minor, Syria, and North Africa the face of the piers, and these barrel to ascertain the different methods vaults have been found sufficient for of Byzantine construction, and to make the purpose, without requiring any sure of his conclusions; no ruins and other abutments, only in this case the no alterations that were being made dome is 33 ft. 6 in. diameter, and that have escaped his vigilant eye, and he of Sta. Sophia 103 ft. When the Byzan- has observed all the current methods tine architects had to work for their of construction to see if any of the Turkish masters, they ultimately abut- ancient practices are still preserved. ted the north and south sides as well I trust you will signify by your apby hemicycles, as at the mosque of plause the benefits he has bestowed on

Professor Aitchison.

THE MICHIGAN TRYST (O BVILDING

GRAND RAPIDS, MICH

5 S-BEMAN ARCH





RAYMOND LEE.

CHAPTER XIII.

RAYMOND'S ERROR.

THE "law of required change" is very active in natures like our friend Winter's. Ralph lived chiefly at the periphery of his experiences, where unrest is strongest and the tyranny of the mood or moment fiercest. He had been led to accept a position in Marian's schools by a restless desire for his own approval. The theatrical element in his composition kept him for ever playing to his own shadow. When he decided to remain in Eastchester and immerse himself in the prosyness of Smeltham for the benefit of orphan and pauper children, he felt that at last he was clothing his spiritual life with tolerable completeness. He enjoyed something like the sensations that tickle the parvenu upon first infringing upon "Society;" only in Ralph's case the elevation was a moral one. Yes, here too in the moral world as well as in the world of dollars and cents, peerages and distinctions, there is something, difficult to name, that is akin to snobbery. We find the nouveaux riches who have recently "struck oil," deep veins of unctious religiosity, and chapmen and commoners whose nobility in virtue has been "conferred," not inherited as a natural endowment. The tailor-made gentleman in Society has his counterpart among the morally elect. Perhaps we ought not to blame Ralph if he mistook an easy self-satisfaction for spiritual exaltation. Who hasn't done so, particularly in these days when we are so busy forming co-operative societies for our moral gratifications in order that we may eke out a sensible result from exceedingly small personal contributions? Tallowfat belongs to the Haut Ton Charity Organization, and once a year, when he makes his limited donation (as published in the Society's report), the good man feels that he has been repeating the miracle of the loaves and fishes. Last year each member of the Society of Virtuous Spinsters must have obtained almost the delights of industrious maternity through the reclamation of the thirty-six fallen creatures reported by the Society's agents. In this age of wonderful economies is there anything more admirable than our labor-saving devices?

After a short time Ralph again grew tired of himself, even in his moral rôle. The trouble was he couldn't perceive that the ideal is only our every-day commonplaces viewed in a certain perspective. He was incapable of understanding that the commonplace is the substance and centre in which the ideal inheres. There are no heroic moments for the hero. Surely one of the dullest, painfullest drudgeries that man can possibly perform is the making of grand history. Ralph detested the commonplace; he was impatient of drudgery and was convinced that either precluded the ideal. A couple of months at Smeltham disillusioned him. The monotonous surroundings at the school-house lost theatrical value as scenery, and vulgar children striving with the alphabet turned out to be a most insufficient chorus for a hero. He settled down, though with only sub-conscious purpose, to the part he had really been playing from the first in the Smeltham experiment-that of Hero to the Heroine.

Daily intercourse with Marian gave Ralph the fullest opportunity for his part. The little nun was very pleased when Ralph offered her his assistance at the schools.

"Can you find room for me, Miss Pilgrim?" he asked, in a tone of penitential supplication. "I have come to the conclusion that all that you have said to me is right; my life has been too much an affair of self, and of late" (Ralph spoke with feeling), "old voices that I haven't heard for years have been audible."

Marian was delighted. The instinct in woman to save man was gratified. Besides, in the confession of the proselyte is there not a note of laudation for the Evangelist? Mar-

ian's ear was not sensitive enough to recognize the strains of a prothalamium as the undertone of Ralph's confession.

Consciousness is aware of but a small part of the motives that induce us to act, and, dear reader, it was imperception not hypocrisy, or purposeful double-dealing that was at the bottom of Ralph's decision. At first Winter seriously adopted his new life. He deluded himself with the utmost elaboration. He changed his room at the Carroll's because there was a bare possibility that it might be needed by the organist by and by, and Ralph desired to be permanently settled. He purchased a piano and a miscellany of standard works for "study." He wrote home, settled certain financial affairs and-opened a diary in order to record his experiences. The first entry begins: "This new life of mine must not be a failure. Please God it shall not be My hand is to the plough." An entire page of self-expostulation, self-urging, self-assuring follows, ending with: "Have just been playing Beethoven. Lost myself in dream; and the music, as though it were Marian's spirit, took form, and my love was beside me singing to the cadence of the notes. I write 'my love,' but will you ever be mine? I feel sometimes that, like Dante with Beatrice, I love a spirit, not a human being. There is, despite the immediacy of touch and sight in our daily intercourse, a sense ofwhat shall I say?—remoteness, that tantalizes me always and chills at times."

Day after day Ralph set out for Smeltham, sometimes alone, but not infrequently in company with Marian, either driving or afoot. This companionship was charming. It was so near, so exclusive of interference, so unconstrained. Surely, it would have flattered the hopes of any lover. But, Ralph soon discovered that it had limits, or rather limitations. Strive as he might, he could not extend his friendship with Marian beyond the point already attained. He found that as he pressed away from the centre of the peculiar set of circumstances that had brought them together he seemed to remove himself from recognition. It was as though he were associated with somebody whose familiarity with his language was sufficient for the inter-

change only of a very limited number of well-defined ideas. For complete intercourse another tongue, unknown to him, was needed. Ralph believed that he would be able to discover even that in time.

Ralph's progression along the course he had entered would have been more rapid than it was but for his meeting with Raymond Lee. This new friendship caused him to linger on his way. It added so much to his existence at one point that he did not mark how much was subtracted daily at another. He did not notice as acutely as he might how the Smeltham schools, the Workingmen's Club, the boisterous, unkempt children—the material of his new spiritual life—slipped little by little into the drab of the commonplace, and how rapidly the fire of his new emotion was burning out before any part of this material had been permanently stamped with the character of the ideal. Ralph's enthusiasms were of the kind that need to be centred in flesh and blood. A personality rather than an abstraction was always the centre of his adoration. It had been so with Marian and the schools; and with Raymond Lee, he won Ralph's love—for the friendship was not less than love-because in the essence of Raymond's nature, in the fabric of the younger man's personality, there were certain spiritual elements which Ralph longed to possess in himself, yet felt were hopelessly beyond his attainment. He was dimly aware of the contents of his own character, and perceived still more dimly that our natures are the product of an alchemy beyond the scope of human power. We may develop what there is within us. but we can impose little from without. There is no alembic wherein the grosser elements of our nature can be transmuted and the dross converted to gold. We cannot create a virtue we do not possess any easier than we can supply a deficient sense. The poetic sensitiveness, the natural truthfulness, the dominant quality of inevitableness in Raymond's individuality attracted, fascinated Ralph—the new friendship was an addition to his own life on the side of its deficiencies. So Ralph clung to him as a part of his salvation; and, as friendship with Ralph was a very active affection, not only begetting at every little

turn of companionship ardent, spontaneous generosities, but necessitating confessions and confidences, it was not long before Raymond—despite protests and his natural distaste for obligation—found himself a deep debtor to Ralph for scores of delicate kindnesses, as well as the keeper of all his intimate confidences. Painful as the position was, Ralph forced him into the full possession of all his hopes concerning Marian. He came in time even to look to Raymond for comfort and advice.

One Sunday morning the two were seated in Ralph's room at the Carroll's. Raymond, of late, had made it almost a regular practice to remain over Saturday night with

Ralph.

"For Heaven's sake, Raymond," cried Ralph, irritably, "throw that 'butt' away and light another cigar. Help yourself. Beyond a certain point economy ceases to be a virtue. Light it well. If it doesn't burn evenly it will be no better than the offence it displaced. Pshaw, doesn't it rain!"

Ralph arose and went to the window overlooking the garden and the Cathedral beyond it.

"I like to hear that soft, steady downpour," said Raymond, lazily. "It soothes."

"I believe you would fatten on melancholy. A day like this gives me the blues. Even the sound of the Cathedral bells is moist. Listen to them."

"I've been listening to them for the last five minutes. There's something in the sound that passes into the mind and echoes there. The spring is in the air this morning, Ralph."

"I wish it would get into the earth. I'm sick of your gloomy English winter. Raymond, I wish you had once felt the exhilaration of our cold, ringing American winters."

"I wish I had, Ralph, I might be able to sympathize with your disgust."

Ralph left the window and flung himself into an arm-chair beside Raymond.

"Say, Ray, if I should start for home, would you come with me?"

Raymond commenced to study the floor. After a while he turned to Ralph.

"Yes, I think I would. I have come to rather like the idea, since you first spoke to me of it. Do you know, I fancy something is driving me out of Eastchester? But what's moving you, Ralph? You can't be thinking of leaving the country....unless Miss...."

"That's just it, Ray. I fear that with this hope of mine, as with everything else I have striven for in life, I'm doomed to failure."

Winter arose and began to pace the room.

"The curse of incompleteness," he continued bitterly, "is upon everything I touch. I am permitted to open the gate so that I can catch a glimpse of what's within, but I never can open it wide enough to pass through."

"Nonsense, Ralph. In this particular matter I can't see what reason you have for despair."

"Because, Raymond, you don't love the girl. Love is hedged with subtle intuitions. Of late I have had a persistent foreboding of disappointment. Why, do you know the very atmosphere and character of my surroundings here seem to have changed. The—what shall I say?—air of permanence, of settled relationship with the things around me has quite gone."

"You are moody, Ralph. It's a passing humor."

"No, no, Ray. The something I have been expecting seems to have gone by. I have become merely a lingerer."

"Nonsense, Ralph. You've got a bad case of weather affliction. When the sun shines again you'll be all right."

"I wish I could think so. This is not a new feeling. It has been growing with me for weeks. Rain or sunshine has not affected it. The source is elsewhere, old man."

"But—Ralph—have you—spoken to Miss Pilgrim?" Raymond's voice faltered a little.

"Why do you insist upon calling her Miss Pilgrim with me," asked Ralph, irritably. "Say Marian. I want all the music I can get before...."

Ralph finished the sentence on the piano with three or four melancholy, wailing chords which he struck half unconsciously. Raymond went over to him. Putting a hand on his shoulder, he said softly:

"You haven't answered my question, Ralph."

Ralph's fingers continued to move idly over the keys.

"No, Ray, I haven't spoken. But I have tried. Always I have met what is even worse than inhospitality to my desires—an impossibility of recognition. I don't believe Marian will ever marry."

Raymond winced. Ralph continued to play. After a moment Raymond asked:

"What makes you think that?"

Ralph wheeled around quickly on the music-stool.

"You remember when Miss Craik and John Dix were married? Well. As the two left the church I whispered to Marian, 'They are so happy, I envy them.' 'Why do that," she asked, 'when there are so many ways of being happy?' 'But none like that,' I said. 'Yes, many ways quite as pleasant,' she replied. 'Wouldn't you marry?' I asked. It was all I could do, Ray, to conceal my trembling. She was silent for a moment, then answered my question in that serious, thoughtful way of hers as though she were making some declaration of faith. 'I don't think so, Mr. Winter. I don't think it's possible now.' I need not tell you this took the heart out of me. It was said so plainly, as though I was the remotest person from any possible relationship with her. Since then I have not dared, even in the most distant way, to approach the subject again."

"But that is three months ago, and in three months, Ralph, how many times can a woman change her mind?"

"But not Marian, Ray. She is a creature full of dreams and fancies, yet so constant. Mrs. Carroll told me that Marian once said to her that she *knew* the man she would marry, if she married at all. Mrs. Carroll says she believes that is exactly so, Marian is always dreaming. I am not he, Ray. My destiny isn't a happy one."

"Destiny is not troubling herself about you Ralph. She has bigger affairs to attend to. Just at present, for instance, she is very busy in your country preparing a new theatre for a new world-tragedy, comedy, idyllic drama or roaring farce. Like the soubrette in the first act she is spreading the table

now, and History with all the great actors will follow by and by. How important you make yourself with the notion that Destiny's busy with you."

Ralph smiled.

"I suppose a man's little toe is larger than the universe when there's a pain in it; but, Ray, I've no hope and I'm blue, and if it wasn't for you I'd—I don't know where I'd be."

"Don't talk that way, old man, it's weak. Cheer up, you're under the weather. When it clears up you will see what everybody sees, that Miss Marian 's in love with you."

"Who sees it? Who says so?" asked Ralph, eagerly.

"I see it. Mr. Wart sees it. Mrs. Carroll, here, sees it," answered Raymond, warmly. "Who doesn't see it, but you—because (into Raymond's voice there came a deeper accent) you are in the light, Ralph, and we are in the shadow."

"What's the matter, Ray?"

"Matter? Nothing, except that it pains me, Ralph, to see you so foolishly despondent over fantasies. Marian is in love with you; don't you hear it in her voice which grows sweeter and softer every day and remoter like the voice of one that lives in dreams? don't you see it in her eyes which reveal more from within than penetrates from without? don't you perceive that the power of the mystery is with her, and everything she touches is blossoming for you? Why, I'd be willing to die "—Raymond's voice suddenly fell and passed into quite another key—"willing to die if I could see you together and happy. I love both of you."

Raymond was perilously near to tears. He was looking

into Ralph's face.

"Why, Ray, you're sick; how pale you are," cried Ralph, springing forward. "Lie down on the sofa."

"It's those strong cigars of yours, Ralph. I will lie down. Don't mind, I can make myself comfortable. Play to me—your marriage song, Ralph. Marian is here in spirit, play to her."

Raymond closed his eyes so that the music might not be interrupted. Instantly he felt its spell. Feelings that a moment before had cried to him so poignantly seemed to be absorbed into a tenderer medium and float away like music of his own making. It was so natural that Marian should love Ralph; of her love for Ralph there could be no doubt. As for himself what was he but an interloper, torturing himself by taking part in a play that really did not concern him. Dear old Ralph, impetuous, impossible Ralph, wrestling forever with his own shadow and crying that the Powers of Darkness are leaguered against him. How absurd! when a word would loosen Life's one enchantment and dissolve the prosy world—dear, how the music suggests it-into moonlight and purple shadows and living silences in which the unspoken word to fulfill the soul desire trembles at the point of utterance. In Ralph's present frame of mind doubt may rule until-what is he playing? How that music soars. The eye follows the lark and, as the little singer fades, is lost-in a vision of Heaven. Why could not I speak or hint to Marian. She will understand. She is to be here this evening. Why not speak at once? There, that is the measure, the full chords, the straining notes, the cry of joy, the heart's jubilation.

"That's splendid, Ralph," cried Raymond, rising. "Splendid—splendid, old fellow. You and Marian shall leave the church to it, if I can only get somebody to play it."

"Do you like it?" asked Ralph, smiling, pleased.

"You never did anything better."

"It came to me instantly like a thought, upon changing the key of what I had been playing. Look. So."

Marian was a regular visitor at the Carroll's on Sunday afternoons. For years she had devoted that part of the week to her old friends. On Sunday, after dinner, the great historian took a nap, and as soon as his eyes were firmly closed on the big sofa in the library, Marian would slip over to the organist's. Formerly the visits were short, but upon Ralph's arrival they were lengthened, until at last they frequently extended well into the evening—that was when Ralph was in a playing mood, or when the conversation happened to stride into a lengthy and interesting road. When Raymond joined the circle the later hours became the rule, and the cathedral clock usually had struck eight before Marian set out across the Close for home.

The rainy weather on this particular Sunday began to break up shortly before sunset. The dark sky opened low on the Western horizon and revealed a further heaven beyond, of pale blue suffused with a watery yellow light that shot out from under the distant edge of sombre, purplish clouds, and colored the twilight. The wind had died, but the moisture still dripped from the eaves of the house and the bare, black branches of the trees. The little party had broken up earlier than usual for the purpose of taking advantage of the better weather by walking over to Marian's for tea. Mr. and Mrs. Carroll had gone to their rooms to prepare for the street, and so had Ralph to his for the same purpose. Marian and Raymond were alone. Marian was sitting by the window. To Raymond who was watching hidden in the gloom, her form appeared as a dark shadow outlined against the pale brightness of the far West. Her hands were folded listlessly in her lap. She had passed for a moment into reverie watching the twilight. Every movement of thought toward the purpose Raymond had set before himself in the morning stirred his heart so violently that he almost feared Marian would hear it. The silence was like a heavier atmosphere that encompassed him about and prevented action. He could hear his thoughts, and once he felt sure that they had become audible. But no, Marian didn't stir; the only sounds were the ticking of the clock and the irregular dripping of the water. The yellow of the sunset changed to crimson. The bare trees and their gaunt branches grew darker against the sky and shuddered as a little gust of wind like a belated bird hurried past into the night.

Raymond's thoughts were in a tumult—they were crowding in upon him from so many quarters. They vanished suddenly when Marian said:

"An evening like this seems to sing the nocturne Mr. Winter played. Looking yonder one can hear it so clearly."

Raymond crossed the room to her side at the window.

"Yes, it is the very spirit of a moment like this, and Ralph plays it exquisitely."

"Exquisitely," repeated Marian, softly. "Exquisitely. But it is almost too sad, such a hopeless cry, neither to God nor man."

"Yes," said Raymond, struggling to shake off the terrible feeling of constriction around the heart. "It—have you noticed—I think Ralph is very unhappy, perhaps that is why he plays it."

"I hope not," exclaimed Marian with a little surprise.

"I would be sorry."

"Yes," said Raymond, interrupting eagerly. "I was sure you would regret it. I have been troubled of late to see the change in Ralph. He is so sensitive—where—his feelings are concerned."

Raymond stumbled badly with the last sentence. Marian

didn't perceive the drift of it.

"Yes," she said, vaguely, and then added dubiously: "I thought Mr. Winter obtained a great deal of satisfaction from his work at the schools. He told me he had never been happier."

"Miss Pilgrim, do you know I am afraid Ralph has learnt

more at the schools than he has taught."

Marian noticed a change in the tone of Raymond's voice. She raised her eyes quickly to his, but the light was not strong enough for her to see his face clearly.

"I don't quite understand."

Raymond's heart was struggling violently. He had to grip the back of Marian's chair with one of his hands as he said:

"Oh, Miss Pilgrim, pardon me—understand me; Ralph loves you."

The startled reply that followed his speech struck him like a blow.

"No, no."

Marian arose from her chair, threw one glance at Raymond and then buried her face on her hands.

"Forgive me, Miss Pilgrim, forgive me. I had no idea I could be mistaken. Oh, I am so sorry. It was for Ralph."

Raymond approached closer to Marian, and as he did so her hands fell to her side and she turned her face for a moment full to his. The movement was eloquent of a momentary powerlessness, a mute appeal. In an instant Raymond's hand was in hers.

"Oh, Marian," he cried.

The room and the yellow twilight mingled and spun around him. Then he felt a hard grip upon his shoulders. The face that he had seen on the beach at St. Michael's, years ago, was again peering into his out of the darkness, the same blood-shot eyes, the same ferocious scowl, so distinct this time that every lineament was visible. He heard Marian's voice crying in alarm:

"Mr. Winter!"

The sound seemed to dispel the giddiness. He felt Marian pressing him gently into a seat.

"Did he hurt you?" she asked.

"Who? Oh, no! It is only a dream; a silly phantasy that came to me long ago at St. Michael's."

"Crying, Marian? What have I said? Oh, here's Mr. and Mrs. Carroll! Where's Ralph?"

"He ran out," answered Marian, struggling to hide her tears. "He must be in the garden."

But Ralph was not found that evening.

To be continued.





NEEDED IMPROVEMENT IN PLASTER FOR WALLS AND CEILINGS.



HIS paper relates to

and plasterers, carpenters, decora- public chitects as well) may find herein suggestions, relating to the subject in question, which have not hitherto been brought to their notice.

When it is considered that forty millions of the sixty millions of barrels of lime, annually produced in this country, are applied to walls and ceilings, the magnitude alone of the subject of plastering would warrant greater consideration than it has received.

Not long ago houses for homes, as well as public buildings of any pretension, were fashioned substantially in accordance with certain lines, forms of olden times, which were to be no dogmas; while ordinary resident houses, beauty, comfort and convenience.

But, within the last fifty years or so, one of the more im- these arbitrary rules of earlier archiportant and the tecture have yielded their sway; so that most neglected feat- now, when a person would erect a ure of the art of structure for his home, instead of seekbuilding; namely, ing to build as others have built, he the plastering of strives to originate a plan that will so walls and ceilings. far differ from dwellings of his neigh-Though it may con- bors that it shall have not only an tain nothing new and therefore interidentity of its own, but if possible, emesting to the learned architect, whose brace more and finer lines and forms profession implies a thorough knowl- of grace and beauty, and more haredge of every art and detail relating moniously blended shades of color, and to construction, it must be kept in mind include a more desirable arrangement that others less informed are variously of rooms, closets, nooks and corners, interested in the execution of the promotive of satisfaction, comfort and structures which he originates and convenience, than any house previously lays out; as, contractors, masons built. This may be said also of various buildings, including tors, plumbers, glaziers, painters, churches-though churches, temples etc., and especially the owners and occu- and cathedrals doubtless retain more of pants. These (and possibly some ar- the styles of former times than any other class of structures.

After the days of Rome, until comparatively recent times, architects were more ambitious to adhere to classic lines, and further develop the fine-art elements of construction, than to study utility, ever seeking for those fine and exquisite combinations of forms, harmony of colors and decorations, which they supposed could be so far discovered and developed as to yield no less: rapturous delight to our vision than music affords our hearing. But the later leaders of the profession, recognizing the new and more practical demands and proportions laid down by architects of modern developments, have given greater attention to utility and adaptamore deviated from than religious tion to present needs, which has resulted in producing more desirable particularly in country districts and dwellings and more practical public villages, were as devoid of architecture structures, embracing, if not so much as dry-goods boxes, barren alike of of the heavy, massive grandeur of exceptional samples of ancient and mediæval times, yet greater usefulness and the use and stability of the structure is more general variation of architectural

beauty.

Hence our cities, villages, and even country districts, are studded with an endless variety of cosey, beautiful and homelike dwellings, which, together with our innumerable banks, exchanges, office-buildings, blocks of flats, clubhouses, warehouses, railroad stations, hospitals, town-halls and other civic structures, insurance offices, picture and other art galleries, theatres, museums, colleges, etc., present throughout all the more civilized nations a variety and general picturesque display of practical architecture undreamed of by architects of former ages.

Besides this advancement in external beauty of residential and other structures, various improvements have been made in the choice of building materials, as a better selection of stone and extended use of iron and terra-cotta; and internal modern conveniences of every kind have been provided, as steam-elevators, gas, water, electricbells and lights, annunciators, speaking-tubes, heating apparatuses, ventilators, toilet-rooms, etc.; and great progress has also been made in fine finishing, including an endless variety of polished hard-wood finish, moldings, panels and carvings, tiled floors, plateglass windows, chandeliers, mirrors and carpets, and all kinds of better hardware, from locks to window-catches; until no pains or skill have been spared in perfecting, decorating and beautifying our dwellings and other structures to the completest degree, except in the matter of plaster employed for walls and ceilings, which, instead of having kept pace with other improvements, has deteriorated, not being as good now as it was years ago.

In fact, most of the plastering of the present time is of such inferior quality that its failure to stand often causes the destruction of paper embellishments, painted and other wall decorations far more costly than the plastered walls

themselves.

accomplishes so much to produce inter- may be mentioned what is known as nal neatness and elegance, and no one Parian cement and Keene's cement,

concerned, than that of the plasterer. Plastering of walls and ceilings constitutes the completion of five of the six sides of every room, hall and closet, and hence it is the chief part and finish of the entire interior of all residential and most other structures. Therefore. there must be some explanation, which possibly may be found in this article, why the art has not been, from time to time, correspondingly perfected with other building improvements.

The very general practice of plastering walls and ceilings is of comparatively late date. Not much more than a century ago walls were wainscoted and ceilings boarded (or boarded and canvassed), or left with naked joists, both in England and on the Continent. The mediæval school of architects, which, with the cry of "no shams," would return to this style of finish, is forced to admit, after all, that good cementitious plaster is preferable to

wood for walls and ceilings.

To supply many needs, especially in the different departments of construction, thorough research has been made throughout the world for materials from which to make various plastic cementitious mixtures that will set and become hard, even in water as well as the air. The variety and extent of the requirements of such mixtures are very great-from submarine foundations to delicate works of art; but for no one purpose are they more useful or more extensively employed than for walls and ceilings in building. For this purpose (as the principal ingredients) none have been or are likely to be discovered superior to or less expensive than carbonate and sulphate of lime.

Even hundreds of years ago cementitious ingredients were treated and combined in such manner and proportions as to produce a fine imitation of polished marble, and of any desired color, but at such great cost as would preclude its common use for walls and

ceilings.

In later times were provided other No art in the economy of building cementitious mixtures, among which is more absolutely important, as far as which, though less costly than artificial

expensive for this purpose.

And now, that is within the last three or four years, an improved wall plaster, consisting of better materials than simply lime, sand and hair, has been dissteam power and machinery in its production, instead of hand labor and utensils, can be provided at the same cost of fair quality of common plaster; and which is being rapidly substituted therefor, and (except delayed somewhat by prejudice against innovations on the part of plasterers) will soon be generally adopted.

sufficiently fine plaster for walls and ceilings can be made from simply good lime, sand and hair. This may be admitted, provided the mixture of the lime and sand be allowed to remain a long time "in stack" before it is wet up for use, and provided also it be sufficiently worked or mixed to insure homogeneity, and provided, too, the hair is not worked in until the time the plaster is wet up for use (as otherwise ceilings—and even this quality of simply lime plaster will not resist the action of water.

But, by the use of the right proportions of both carbonate and sulphate of other materials, and by use of properly treated sand, and other fibre than hair, and the employment of an extensive and well appointed plant, it is known to be not only possible, but eminently practical to produce a more cementitious, harder, stronger and therefore more nearly germ-verminwater and fire-proof, and less costly wall plaster than it is possible to make mon plaster.

To those who are contemplating the

marble, are nevertheless by far too ject of wall plaster, an explanation of the indispensable requisites of the best production, from any special or whatever cementitious materials, will doubtless be of interest. These are:

1st. Suitable quality and preparation covered, and which, by employment of of the materials, especially the sand; 2d, proper proportions of the several ingredients, and 3d, thorough and uniform mixing of the same-neither of which requisites are or can be strictly or even approximately complied with in making wall plaster by the usual means employed, as will be hereafter shown.

First: As to the materials. Whatever may be employed for the cementitious It is claimed by some architects that constituents of the plaster—whether lime, gypsum, Portland cement or any combination of these or others—the sand, which is always a component part, must be of the best and silicious quality. The harder and sharper it is the better, and therefore it should be either river, bank or pit sand. Sea sand is objectionable, because its particles are rounded by attrition, caused by the action of the sea, which makes it less efficient than sharp, angular sand, and the lime would destroy it). But plaster for the reason too that it cannot be enthus made, and by hand labor, though tirely freed from a saline taint whereby it contain only lime, hair and unwashed it gives the walls a tendency to attract sand will also (like the Parian and moisture. It is evident that the sand Keene cements) cost more than can be should not be too coarse, and it must afforded for ordinary use on walls and not contain any very fine particles. It must be free from all foreign substances. Hence, as no sand is ever found in this condition, it must be submitted to treatment; that is, its very fine and coarse particles must be screened out, and all of lime, modified by a small quantity dirt and dust washed out, until it ceases to discolor the wash-water, and then kiln dried; for the very fine particles of sand itself, dirt, dust and water (before wetting for use) only weaken the strength, diminish the hardness and deteriorate the color of the plastered

As an evidence of the superiority of prepared sand, it has been demonstrated that the poorest lime with sand thus from simply lime, sand and hair, and at treated will make better plaster than the such a moderate cost that it will com- best lime with ordinarily good untreated pete in price with ordinarily good com- sand-yet poor lime should never be employed.

Though it is supposed that the adbuilding of residences or other struc- mixture of sand originally was for the tures, and are not familiar with the sub- purpose of saving lime and preventing

shrinking, it is now assumed to have a the walls will not be so hard; if less, valuable chemical function, causing the not so strong and compact. But as the formation of a hard silicate of lime, amount or sum of the voids or interpervading and thus strengthening the stices in different grades of sand greatly plaster. Walls also become harder, in vary (in the extreme as much as 18 per time, by gradual conversion of the cent), this fact must also be kept in hydrate into carbonate of lime.

is not the purpose of this paper to give the grade of sand employed. an account of the various materials

sum, and asbestos for fibre.

Vicat), as (1) rich limes, (2) poor limes, follows. (3) lime slightly hydraulic, (4) hydraufirst, or rich limestones, which are the put together in the correct proportions, cement. or metallic oxides, and, therefore, infinitesimal part of the mixture shall be are liable to vitrify and discolor in homogeneous and consist of the required burning, and do not slake as freely as definite proportions. rich limestone.

deteriorate the product.

mind in proportioning the other mate-As to the cementitious ingredients, it rials, so as to meet the requirements of

By a series of experiments these proused, their relative proportions and the portions can and should be ascertained. process of their combination in the and, in the production of wall plaster, production of the improved wall plaster be strictly adhered to by automatically cement alluded to; further than to or otherwise weighing all the materials mention that the chief cementitious in- before they are mixed. For, without gredients employed are lime and gyp- regard to chemical law of proportions, the best results are no more attainable Pure lime (which is an oxide of a in the production of wall plaster than metal, known in chemistry as calcium) desired qualities in the treatment of does not exist in a natural state, but is iron, steel or any other product involvabundantly found in the conditions of ing whatsoever chemical action. Chemcarbonates (common limestone) and ical, nor any other natural law recogsulphates (gypsum, yielding plaster of nizes cupidity or convenience of plas-Limes are generally classed terers or whomsoever; there must be (since the publication of the work of unqualified compliance, or failure

Third. Relating to the incorporation lic limes, and (5) eminently hydraulic of the materials, it is also evident that, limes. Only the first two are suitable though the several ingredients be of for making wall plaster, and only the good quality and properly prepared and purest oxides of lime (and therefore that the perfection of the plaster will the whitest), should be employed in still greatly depend upon their incorthe manufacture of an improved wall poration; that is, the several ingredi-Poor limestones ents must be so thoroughly and unicontain silica, magnesia, manganese, formly mixed together that every

As it requires, for instance, about a Second. Relating to the proper pro- hundred thousand pounds of dry maportions of the materials, it is evident terials (sand and lime) to plaster the that the best wall plaster (whatever walls and ceilings of an ordinary sized cementitious ingredients may be used), city dwelling, and as these (to obtain the depends also upon some definite relative best results) must be so thoroughly inproportions of the sand and other ma- corporated that not only every ounce terials employed, which if in the least but every particle of the mixture shall deviated from will correspondingly consist of the specific average proportions of the ingredients, it becomes To produce the hardest, most com- apparent that the necessary power and pact and strongest plaster, from any machinery for performing this part of given materials (so far as dependent the work alone, to say nothing of the upon proportions), the amount of lime required power and apparatus for treat-(or whatever cementitious materials are ing the sand, as heretofore described, used) must be sufficient and only suffi- renders it absolutely impossible to make cient to fill the voids or interstices of perfect wall plaster by the method now the sand. If more lime is employed universally employed, or by whatever be used.

ing plant.

ally suggested.

concerned in construction are more or which none may question. less conflicting. To state it mildly, the materials and work than specified; and usually the latter come out ahead—especially is this the case with the plasterer, as will appear:

The difference between good and poor plaster, whether off or on the walls and ceilings, is not apparent; 2d, one of the two chief ingredients (the sand) may not be well selected; 3d, this ingredient, however inferior, may not be properly treated; 4th, the maingredients may not be homogeneously

that could be afforded.

To enlarge a little on these points: First: If, for example, slate were their weight of proper quality. specified for roofing, mahogany for plate glass for windows, etc., the conto employ other materials, as any subsand and hair, there are, owing to the lime than another.

method, at the buildings where it is to usual manner of preparing plaster, no means of determining with any ac-In view, therefore, of the great curacy whether or not the architect's amount of labor indispensable to the specifications are strictly complied production of suitably made wall plaster with; hence the plasterer's integrity is nothing could more forcibly demon- severely subjected to the fascinating strate the advantages of labor-saving temptation of a liberal use of sand, and methods and devices than the handling, often of inferior quality as well. Bepreparing, weighing and properly incor-sides, the greater part of his work is porating its ingredients by an extensive concealed from view by the so-called and well-appointed plaster manufactur- hard finishing coat, which gives his work the appearance of being all right, From what has already been said it irrespective of the merits or demerits may be inferred why plastering of of the cementitious quality of the body walls and ceilings has not only dete- of his plaster. Hence, the temptation riorated, but also why it has not im- of this important artisan to slight his proved; yet, other reasons are natur- work is quite equal to that of the dairyman to water his milk-who finally Though it may be no exception to came to need statutory aid to regulate the prevailing tendency in business his traffic. In fact, the architect and transactions generally, unfortunately contractor are more or less obliged to the interests of the owners of buildings consult the statutes for guidance—but and the masters of the various artisans plasterers have methods and secrets

Second: As to selection of sand, it is former desire and demand of the latter frequently not selected at all, the dirt as good materials and workmanship as excavated for the cellar and foundaare specified and contracted for; while tion being used. If a selection is made, the latter strive to furnish no better it is oftener governed by convenience and cheapness than by its suitable quality; hence, usually, instead of using clean, sharp river or pit sand, a mixture of indifferent sand and dirt is

employed.

Third: As to the treatment of the sand, this is never done, except it contains stones and pebbles as well as dirt, when, to exclude these (the stones and pebbles), it is simply thrown upon a coarse slanting screen. No sand, howterials may be proportioned by chance, ever well selected and free from dirt, and so not with any accuracy; 5th, the is as good without as with treatment; that is, screened, washed and dried as mixed; 6th, formerly no improved wall and for reasons before given. Such plaster has been produced at a cost poor grades of so-called sand are often used that, if submitted to the above treatment, would not yield a fifth of

Fourth: The proportioning of the doors, Philadelphia brick for front wall, sand and lime is only guessed at, the sand being scraped and thrown into tractor would not have the hardihood the slacked lime haphazard, with hoe and shovel, without regard to quantity stitution would be evident. But how- or exact proportions, whereby one batch ever specific be the wording of the of the mixture is liable to have a much specification for plastering with lime, greater or less proportion of sand or

results.

more thoroughly worked or mixed-in eral drying of the structure. some spots it will be nearly all sand, in other places mostly lime.

Much of the common plaster now made that it is self-disintegrating and coat is broken, and for strength is largely tious properties of its ingredients.

While some suitable fibrous material absurd to chiefly rely upon it to hold the fashion of holding beads together upon the hardness of the set and tenacious quality of the cementitious materials.

As regards hair, especially tropical foulest material for the purpose that explanation: could be selected. In fact, were it not fire-proof.

Fifth: As to the homogeneous incor- having inferior, or too much sand, or poration, it is simply impossible by hand both, necessitates a greater thickness of labor and hand implements, at any it than otherwise would be needed, tolerable cost, to sufficiently incorpo- whereby the building becomes too heavrate sand and lime (or whatever cemen- ily loaded, and (at first) unnecessarily titious ingredients) to insure the best saturated with water; whereas, a stronger, harder and quick-setting plas-If a small quantity of plaster, pre- ter would not require the walls (unless pared in the usual way (however supe- desired) to be so thickly coated. Berior the several ingredients, or however sides, with such a plastering cement, correctly they are proportioned), is more of the water would be absorbed examined with a magnifying glass, by the set, and, therefore less of it when being applied to the lath, it will evaporated to swell and injure the be found that minute and even larger woodwork throughout the structure. portions of it contain more than the And, too, by the use of such plaster, average proportion of lime, and other much delay would be avoided in the portions a greater quantity of sand, completion and occupancy of buildings, whereby the plaster, when dried on the as the carpenter, with his work, could lath, will not be as strong, hard or uni- sooner follow the plasterer, and far less form in appearance as it would were it time, also, would be required for gen-

Another unsatisfactory feature of common plaster is its porous and absorptive qualities, affording lodgment used for walls and ceilings is so poorly for moisture and germs of disease in damp weather, which, in turn, are given crumbles away wherever the finishing off by evaporation in dry weather; whereby it is not so wholesome, espedependent upon the employment of cially for hospitals, sanitariums, schoolhair to assist in holding it from falling houses, and resident structures, as a to pieces for lack of inherent cementi- harder, closer-setting and finer grade of plaster.

It is a well-known fact, learned by may be advantageously employed, it is experience, that common plaster does not retard the progress of fire in buildthe particles of plaster together, after ings nearly as effectively as harder and more cementitious plaster, especially if, with a string, instead of depending in the latter, asbestos is employed for fibre.

Another common and serious defect in ordinary plaster is what is technically known by the term "pitting," to undercattle hair, it would seem that it is the stand the cause of which needs a little

Owing to the difficulty, if not imposfor the disinfecting properties of lime, sibility, of burning limestone with perit would breed infection in every house- fect uniformity, so that all parts of it hold. Hence, in view of health and shall be sufficiently burned and none wholesomeness, some vegetable or min- overburned, it follows that, when the eral fibre, as jute or asbestos, would be lime comes to be used, it will not slake preferable; while the employment of with uniformity. Some particles of it asbestos has the advantage of render- will not as readily slake as the bulk of ing dwellings and other buildings more it; and, therefore, when the mortar is made and stacked in piles, all the Plaster (as ordinarily made), for lack unslaked particles will go on slaking; of tenacity, resulting from want of suffi- and it is only by allowing the mortar to ciently cementitious ingredients or, by remain a long time (a year or more) in

this condition that complete slaking of frequently and for a long time exthe lime can be assured.

To save time and expense this is seldom if ever done. The usual practice is that as soon as a considerable quantity is stacked to commence immediately to wet it up and put it on the walls, and cover it over with the so-called hard finish, which for a while appears all right. But in course of time the penetration of air and absorption of moisture will continue to slake the particles of unslaked lime, which at first swell and cause little bulges to appear on the surface of the wall, which finally crumble away and leave little "pits" or indentations.

This blemish of walls cannot be closer setting, harder and non-absorpavoided except, as before stated, by allowing the mixture of lime and sand to long remain in stack, and introducing the hair afterward, to do which makes even lime, sand and hair far more expensive than a superior quality of improved and more cementitious defect.

Still another objection to common plaster is its free absorption of water, and (if once wet) its consequent loss

of tenacity and strength.

To this may be responded, that, in the use of plaster for walls and ceilings, it is not supposed to be subjected to the action of water, and that, therefore, its water-proof quality may be pronounced superessential. But this would be to suppose that vessels of water are never accidently overturned, that roofs never leak, that water pipes never burst, that firemen never drench an entire structure to extinguish flame in a single room. In short, walls and ceilings are frequently exposed to the action of water, especially from defective plumbing; sufficiently resistent of its penetration and effects to suffer no injury by, though long exposed to it; whereby ceilings would often be prevented from falling, and danger to life and expensive repairs avoided.

It has been demonstrated by experience that an inexpensive, hard cementitious plaster can be and is made which is impervious to water, and, though plaster are so widely different that it is

posed thereto, suffers no essential injury; whereas the average common plaster, if once thoroughly wet is practically destroyed; as shown by many a ruined wall and fallen ceiling, caused, perhaps, by a rat-gnawed pipe, a choked drain, or a driving rain-storm.

In view of the extensive application of paint as the final finish of walls, this porous and absorptive quality of com-

mon lime plaster presents also, in this respect, another economic objection in the extra expense of materials and labor for this class of finish. The cost of painting such walls being more than double that of similar treatment of a

tive plaster.

It is also an objection to common plaster, that, not being sufficiently hard and resistent, the walls are subject to defacements and blemishes by unavoidable contact. Besides, as walls are liable to become soiled by dust, dirt and plaster, which is wholly free from this marks of discoloration, they should be sufficiently impervious to resist the penetration of water, to allow them (without injury) to be occasionally washed. Walls made of ordinary plaster cannot be subjected to such treatment, whereas suitably cementitious walls, having a correspondingly hard finish, could be thus cleaned as readily as slabs of marble, and without the slightest injury.

By the present method of preparing plaster on the street, the freezing weather of winter causes much unavoidable delay, not only of the plasterfaucets are never left open, or that ing, but all other work that cannot progress until the plasterers are out of the way; whereas if the plaster were systematically manufactured and supplied, in a dry form, as above set forth, it could be handled and applied with the same and wall plaster, therefore, should be facility in the winter season as at other times of the year. No mixing or further working of the plaster outside of the building being required, the plasterer could proceed uninterrupted either by storm or temperature; which is no inconsiderable consideration in point of convenience and economy of time and expense.

The uses of common mortar and wall

possible and feasible to prepare the lime and sand), such as is used for building purposes other than for walls ployed for concreting and other foundaare to be used, for the various work to it matters not if the sand is not treated, ent with walls and ceilings. the required fineness and superior finish of walls and ceilings exceed that of the plied. Common mortar requires but the one quality of strength. Wall finitesimal homogeneity, germ-verminevery possible excellence. The nature of its use is such that its production should be classed among the highest mechanic arts, for no less desirable is the perfection of walls, especially of residential structures, than fineness of finish of woodwork and fittings.

Therefore, it is utterly impossible, as before stated, to make wall plaster on a sufficiently large scale to meet the demand of its use, by the indifferent and crude means heretofore employed, or by any other possible means which can be devised and operated on or adjacent to the structures on which it is to be used. As well might the painter grind his paints, the mason make his brick, the glazier his glass, etc., or each household make its own flour, sugar, etc., as for the plasterer to undertake to manufacture (on the premises) the ment of the sand and employment of best possible wall plaster.

This, doubtless, would be the view one by means that would be wholly in- of all architects, building contractors, adequate to suitably make the other. plasterers and owners (as it already is Common mortar (consisting only of of many), were it not for the prejudice growing out of long usage, which, at first, opposes all new things and and ceilings, as also mixtures of sand methods. But had wall plaster always and Portland and other cements, em- been thus systematically manufactured and provided, and some innovator tion work, may be advantageously pre- should suggest that the plasterer could pared on or at the premises where they just as well (and better) guess at the relative proportions of his indifferently which such mortars and mixtures are selected materials, and throw them toapplied has no reference to fine finish gether on the street and stir them up or sentient contact (touch and vision); with a hoe (to say nothing of the therefore, with such mortars, if only nuisance he creates by mussing and insufficiently strong for the purposes intended, cumbering the thoroughfare with his huge and unsightly boxes and piles of or the proportion of the ingredients sand), he would be laughed at and set is not so exact, or their incorporation down as a crank; for it would be conso complete. But it is altogether differ- sidered no less absurd than to suggest The the abolishment of the plow and mowplaster for these requires to be as much ing machine, the cotton gin and loom, more perfectly made, and in every way the flour mill and saw mill, or any as far superior to common mortar as other labor saving and perfecting process or device.

From what has been said, it may be work to which common mortar is ap- correctly inferred that (regardless of cost) it is possible to plaster walls and ceilings with materials imitating verplaster requires strength, hardness, itable polished marble, or with such elasticity, adhesiveness, solidity, in- materials as come short of this in cost and hardness, like those known as fire and water-proof qualities, surface Parian cement, Keene's cement, and finish, purity of color, reliability and others that could be mentioned, but which also would be, by far, too costly to be generally afforded.

Therefore, the great desideratum to be attained, as a plaster for walls and ceilings, is something that shall be harder, stronger, whiter, smoother, more cementitious and less porous than the inferior, hand-made lime and hair plaster, heretofore universally employed-something, in short, embracing every required excellence that the highest state of the art can provide, and which will comport with other building improvements of the age, but which, nevertheless, will not be (all things considered) more expensive than a fair quality of ordinary plaster, in order that it may be universally afforded and used.

But, owing to the necessary treatmore and better cementitious ingrediprice) is impossible of attainment, ex- fection, and at a cost not to exceed cept by the substitution for hand labor that of fair common plaster, they estabof extensive and well-equipped plastermanufacturing plants, whereby the plasterer is relieved of all labor in the production of his plaster, except ers throughout the country who, having adding water to the manufactured product.

While this is the only feasible method of making uniform, reliable and suitable wall-plaster, it is also the only means of removing the plasterer's besetting temptation, which has deteriorated his handicraft, measurably destroyed the usefulness of his art, and prevented him from keeping step with his associate artisans in the general improvement of the complex art of construction.

Viewing the importance of the subject in the light of the foregoing paper, J. B. King & Company, by extended study, numerous and elaborate experiments and expenditure of vast sums of money, have finally succeeded in attaining the desideratum of producing and putting upon the market, at the price of fair common plaster, an improved plaster for walls and ceilings, embracing every required excellence as cally different methods of production. above set forth.

The fact that they have, in their foregoing Treatise.

ents (than simply lime), such a de- Windsor Cement Dry Plaster, reached sideratum (including the competitive the highest point of excellence and perlish, as to cost, by the prices they quote; and as to its qualities, by the numerous commendations of architects and builddemonstrated its merits by practical use, confirm all the makers claim.

It is manufactured strictly in accordance with the "Indispensable Requisites of Production" of the best possible Wall Plaster, as described in the foregoing paper; as well as having mineral instead of animal fibre (asbestos instead of hair), which renders it easier of application, more sanitary and fire-proof.

It is sometimes asked, in a significant manner, how it is possible to produce a far better article for the price of a poorer material.

Though such a question seems too foolish to merit a serious answer, we reply briefly by saying, that it is accomplished in the same way that thousands of other better products are had for the same price and even for less than poorer ones; namely, by improved and radi-

For further answer, we refer to the

J. B. King.

Comparative Cost of King's Windsor Asbestos Cement Dry Plaster and Common Plaster for Walls and Ceilings.

ers, plasterers and owners of various structures much difference of opinion, and on the part of some plasterers no little misrepresentation as to the relative cost of King's Windsor Cement Dry Plaster and Common Plaster:

And as the question of cost, especially with the majority of owners, is of equal or greater consideration than that of quality, it is a matter of importance that more reliable information on this subject should be furnished than has been heretofore published.

Doubtless much misapprehension re- employed, especially the sand. lating to the matter occurs from want of specific use of terms and a definite materials used.

As there is among architects, build- understanding as to what is embraced when alluding to cost.

Therefore, to clearly present the case, it is necessary, first of all, to define what is included when referring to the cost of any particular kind of plaster.

The cost of common plaster (consisting of sand, lime and hair), up to the state of being stacked in the street, will depend upon various conditions, some of which are not easily defined, and, therefore, usually overlooked:

1st. The quality of the ingredients

2d. The relative proportions of the

3d. The cost of labor for mixing and tempering, dependent on location, and thoroughness with which these operations are performed.

4th. The cost of transportation, also

dependent on location.

5th. The length of time the plaster remains in stack before being wet up and used, whether for two or three days

or several months.

Therefore, it would be absurd to say that common plaster stacked in the street will cost any specific sum per square yard of its covering capacity, unless the quality and relative proportions of the ingredients (as well as differ by several thousand dollars in some of these other conditions), are their bids for plastering the same strucstipulated and adhered to (which, ture, though their estimates be made up owing to the indefinite and crude man- from the same specifications. ner of making common plaster, is seldom expected, even though such stipu- estimated by the number of square lations are minutely specified by the yards of its walls and ceilings, embracarchitect).

The cost of common plaster, from the state of being stacked in the street up to the state of walls and ceilings, will also depend upon various condi-

tions:

1st. The amount and price of labor employed in working it over or tempering it-whether it is merely wet up or thoroughly worked, to properly incorporate its ingredients.

2d. The depth of grounds—whether five-eighths, six-eighths or seven-

eighths of an inch.

3d. The kind of lath employed-whether wood or metal-as well as upon the different qualities of these.

4th. Upon how far the walls deviate from a true plane-whether or not considerable depressions are to be filled up to level the surface.

5th. Upon what proportion of the work in the structure is on wood lath, and what proportion on brick and terra cotta walls-whether all lath or all brick and terra cotta.

6th. Upon the price of labor where the plastering is done.

7th. Upon the number, magnitude and elaboration of the cornices and centre-pieces.

Hence, it would be still further absurd to say, irrespective of these variplaster, applied to the walls, will cost any specific sum per square yard.

As thus there is no uniformity of quality and conditions, and consequently no invariable cost of common plaster (either in stack or on the walls), plasterers widely differ in their estimates; varying (including wood lath and lathing), from 35 to 65 cents per square yard-while the difference for better grades of work, with common plaster, will be still greater, and cost still more, being a dollar and upward per square vard.

It is not uncommon for plasterers to

The cost of plastering a building is ing all necessary materials and labor, including the lath and lathing, cornices and centre pieces, plaster and plas-

tering.

But the lath and lathing, the materials and labor for the cornices and centre-pieces, and the materials and labor for the finishing coat, and the labor for applying the plaster that constitutes the scratch and brown coats (on a given structure in accordance with given specifications), will not vary in cost whatever the kind of plaster used for the scratch and brown coats. Therefore, the cost of all the materials and labor, except what is necessary to the production of the stacked plaster and its tempering (needed for the scratch and brown coats), may be eliminated from the calculation in estimating the relative cost of common plaster and Windsor Cement Dry Plaster, which practically narrows the question down to the comparative cost of common plaster stacked, wet up and tempered; and Windsor Cement Dry Plaster delivered, also ready to be wet up.

As common plaster can be (and often is) made of such poor grades of lime and ruinous proportions of inferior sand, and as, on the other hand, it is possible to make it to cost even a dollar or more per yard, it is not proposed to compare the cost of Windsor Cement Dry Plaster either with the cost of the ous additional conditions, that common poorest or best common plaster; for, as

the best is too expensive to be afforded, incorporation and tempering. it is evident that it would be altogether inconsistent to compare the cost of carting, to and fro, necessary lumber Windsor Cement Dry Plaster either with a worthless or a "fancy" grade of

common plaster.

In fact, it is misleading, unjust and absurd to flippantly say that Windsor Cement costs more than common plaster without stating what grade or quality of common plaster is referred toless than a dollar and a half per square

Therefore, that there may be some definite understanding as to what is meant by the term common plaster, we will designate no fancy quality, but select a formula which is well known, and which all architects, builders and owners, as well as all fair-minded plasterers, absolutely required for ordinary fair work; namely, the formula laid down S. Engineers, as to the required materials and their proportions; and as to for mixing them, we will take the present quotations in the New York market.

This formula of Col. Gilmore is recognized as the standard by the Government, and as authority by publishers

of statistical books.

It will be seen that it does not call treated sand, beyond ordinary screening, or require the mixture to stand any length of time in stack.

Col. Gilmore's Formula for Common Plaster; Materials and Labor at New York Prices; for Scratch and Brown Coats, Stacked, Wet Up and Tempereted, Ready for the Hod; for 100 hod. square yards, measured on the Walls, and 3-4 inch grounds on Wood Lath:

Lime, 4 casks at \$1.10	\$4	40
Hair, 4 bushels at 25 cents	I	00
Sand, 7 loads at 75 cents	5	25
Labor for mixing, stacking and tempering	3	50
· ·		

Being, per square yard, 14 15-100 cents.

Total. \$14 15

the poorest is totally unfit to use, while than is required for the most ordinary

Neither does it include the cost of for, or setting up of mixing-boxes, etc.;

or wear and tear of mixing-tools, or various disadvantages of unavoidable delay. Hence, no exception can be taken to the citation of this formula and grade of plaster, or its estimated

cost in making the comparison.

J. B. King & Company, sole patentees as otherwise it may be anything from and proprietors of the above material, mud to a fine grade of work, costing not furnish Windsor Cement Dry Plaster, deliverable at any building within the cities of New York, Brooklyn, Jersey City and near-by places connected to the said cities by water transportation, at the rate of \$7 per ton, and allow the purchaser a rebate for bags returned, at the rate of \$1.30 per ton, which makes the price \$5.70 per ton, ready for use, simply by adding water to wet will admit is no better in quality than is it up, the covering capacity of which, on wood lath, is from 60 to 65 square yards per ton, making the price by Col. Gilmore, of the Corps of U. from 8 3-4 to 9 1-2 cents per square yard.

Besides, the covering capacity of this the prices of these and the cost of labor material is fully ten per cent. greater than common plaster, owing to the requirement of some less space between

the lath.

Common plaster, as per Col. Gilmore's formula, per square yard, 3-4inch grounds, wood lath, 14 15-100 cents; King's Windsor Cement Dry Plaster per square yard, 3-4-inch grounds, wood lath, 8 3-4 to 9 1-2 cents, which is an average of 9 1.8 cents per yard.

Hence, it is shown that fair common plaster, ready for the hod, costs five cents per square yard more than Windsor Cement Dry Plaster also ready for the

The result of the above estimate is not changed or in any way affected by the thickness of the grounds, or style of lath used, or by whatever walls are to be plastered-whether wood or metal lath, brick or terra cotta walls or walls that are out of true-for the reason that the comparison shows that Windsor Cement Dry Plaster is cheaper than common plaster, ton for ton, what-This estimate calls for no more labor ever be the use to which it is applied, even if it were to fill up a mountain their own and all varieties and grades of

Windsor Cement Dry Plaster costs refer to a very inferior grade of com- to its merits as compared with common mon plaster—a quality that no repu- plaster. table architect or thoughtful and pruto accept.

Plasterers in some instances who, having contracted to do certain buildings with common plaster, and afterward having been requested to state what they would charge extra to substitute Windsor Cement, have raised their price, over and above what they

had agreed to do the same work for with lime and hair, to such a sum that the extra price alone would purchase

necessary for the entire work.

In a case like this, what must be the conclusion of the architect and owner as to the quality and cost of the common plaster that the plasterer is expecting to use on the job. Surely this is a "hint to the wise" that should be "sufficient" to convince the owners that plaster and plastering are of the variable and uncertain features of the art of construction.

As it is so frequently the case that plastered walls are sooner or later tive original cost of plastering, to refer to the comparative cost of painting cious sand with their Windsor Cement. them, if plastered with different ma-

terials.

Relating to this feature, it has been repeatedly demonstrated that, owing to their non-porus and therefore non-absorptive qualities, the cost of painting -- all the materials (even the fibre em-Windsor Cement walls is not equal to ployed) that enter into the composition one-half the expenses of painting those being of the best quality and automade of common plaster; which, though matically and accurately weighed before viewed from only an economic standpoint, is a matter of no small consideration.

Naturally associated with the com-

plasters.

J. B. King & Co. have already sold ing Treatise. over a million barrels of their Windsor Cement for plastering walls and ceil- therefore, is now as reliable and per-

sand, and considering that architects, Therefore, when plasterers say that builders, plasterers and owners have universally admitted its superiority, it more than lime and hair, they must is deemed superfluous to even allude

Notwithstanding the extensive dedential owner of any structure is willing mand for and universal appreciation of their Cement, they had until recently necessarily taken the chances of trusting to thousands of masons and plasterers to select and proportion the sand, which in many instances has been inferior and two liberally used, whereby their material, in not a few cases, has unjustly suffered deterioration and con-

sequent discredit.

Appreciating this, and seeing that they were thus more or less in the double the quantity of this cement hands of others, and, therefore, held responsible for results over which they had no control; and realizing the extensive and growing demand for a perfect and always reliable wall plaster; and knowing the utter impossibility of producing such a plaster unless they could determine and control the quality, quantity, proportion and incorporation of all the ingredients that enter into its composition (except the addition of water to wet it up), they have established, in connection with their mills, an extensive and expensive sandfinished by painting them, it becomes treating plant, whereby they now simpertinent, in connection with the rela- ultaneously incorporate the correct proportions of a proper grade of sili-

They select the best pit, bank or river sand to be had, screen out all its fine particles, wash out all dust, dirt and foreign matter, kiln-dry and thoroughly incorporate it with the cement

being mixed.

In short, their Windsor Cement Dry Plaster is manufactured in strict compliance with all the indispensable reparative cost is the relative merit of quisites of production of the best possible wall plaster as set forth in the preced-

Their Windsor Cement Dry Plaster, ings, with which plasterers have mixed fect as in the present state of the arts

satisfaction.

much superior to common plaster as to sell.

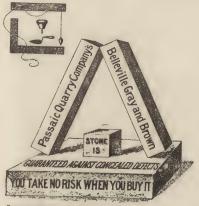
it is possible to provide; and by its use genuine hardwoods are to their imitathe architect, builder and plasterer are tions, it will soon come to be a matter greatly relieved of anxiety and respon- of as much importance with a would-be sibility heretofore attendant upon the purchaser of a house to learn if its walls uncertainty of the results of plastering; and ceilings are done with this Cement and the owners are assured of good instead of common plaster as it now is work and saved from costly repairs for him to know if the wood finish conresulting from the use of chance-mixed, sists of real mahogany, cherry, oak, etc., hand-made and half-made wall plaster; or only stained imitations of these. But while the occupants of houses plastered real hardwood finish costs more than with their Cement find the walls sur- their imitations, while this superior wall rounding them a source of perpetual cement costs no more than common plaster-which is worth the builder's As this Cement Dry Plaster is as consideration, though he builds but

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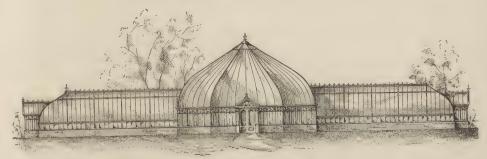




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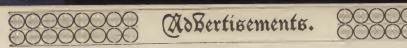
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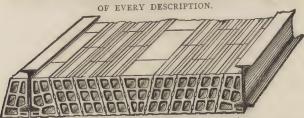
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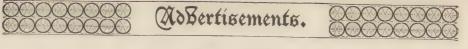
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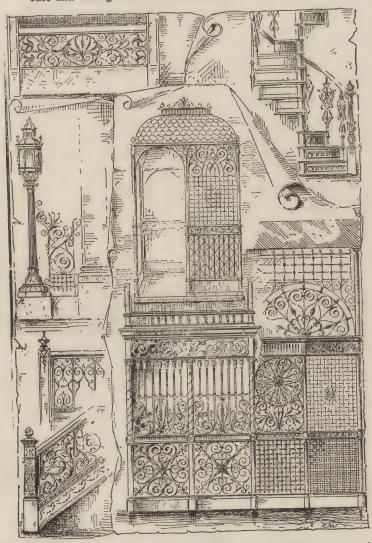
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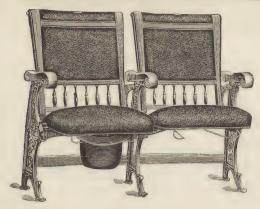
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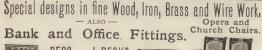
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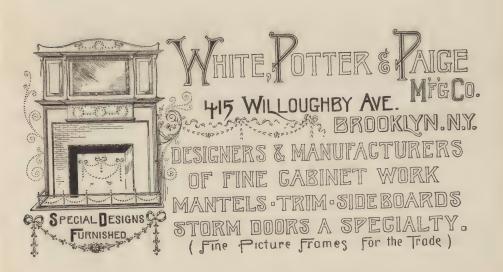
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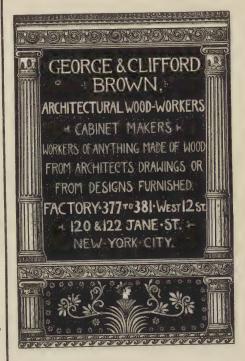
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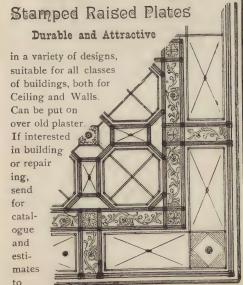
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New Penn, R. R. Station, Jersey City, N. J.
Monmouth Beach Club-House, Long Branch, N. J.
"Laurel in the Pines," Lakewood, N. J.
New Bowdoin Square Theatre, Boston, Mass
Opera House Block, Springfield, Mass.
Residence of George Westinghouse, Jr., Lenox, Mass.
Downing Street School, Worcester, Mass.
Marl'seton Sanatorium Co., Markleton, Pa.
Duquesne Theatre, Pittsburgh, Pa.
National Bank of Commerce, Pittsburgh, Pa.
Sixth Ave. Hotel, Pittsburgh, Pa.
Residence of Mrs Hostetter, Pittsburgh, Pa.
Supt's Headquarters Penn, R. R., Altoona, Pa.
First National Bank, Cooperstown, Pa.
Lus. Court-House and Post-Office, Williamsport, Pa.
Commonwealth Building, Scranton, Pa.
Hope Building, Brown University, Providence, R. I.
R. I. Hospital Trust Co., Providence, R. I.
R. I. Hospital Trust Co., Providence, R. I.
Calvert Hall School, Baltimore, Md.
Residence of Mr Evans, Ruxton, Md.
Straights University, New Orleans, La.
State Capitol, Columbia, S. C.
Y. M. C. A. Building, Glens Falls, N. Y.
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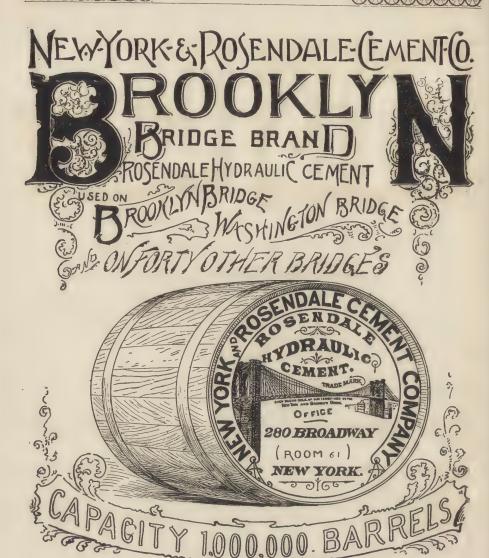
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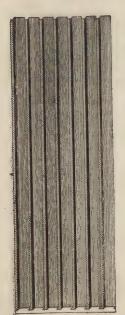
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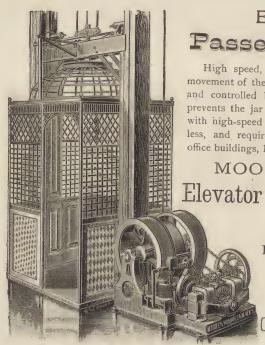
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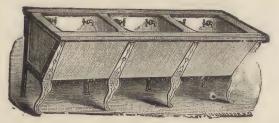
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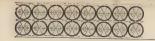
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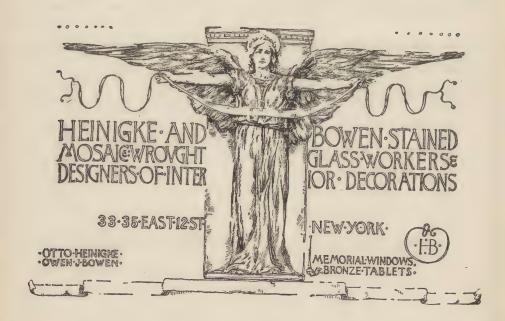


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